



Compact

**DUAL LATEROLOG - GR
DENSITY - NEUTRON
1:500 MD**

COMPANY **ESSO AUSTRALIA PTY LTD**

WELL **BREAM A6A
BREAM**

FIELD **BASS STRAIT
AUSTRALIA**

PROVINCE/COUNTRY **AUSTRALIA**

COUNTRY/STATE **AUSTRALIA**

LOCATION **38DEG 29' 58.784"S 147DEG 46' 20.421" E
5738461.490 N 567347.120 E**

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

Date **14-FEB-2006**

Run Number **ONE**

Depth Driller **3256.00 metres**

Depth Logger **3253.00 metres**

First Reading **3246.00 metres**

Last Reading **850.50 metres**

Casing Driller **850.50 metres**

Casing Logger **850.50 metres**

Elevations:
KB 32.82 metres
DF -59.40 metres
GL

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	850.50	3256.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	10.750	0.00	850.50	40.50

REMARKS

RIG: NABORS 453

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

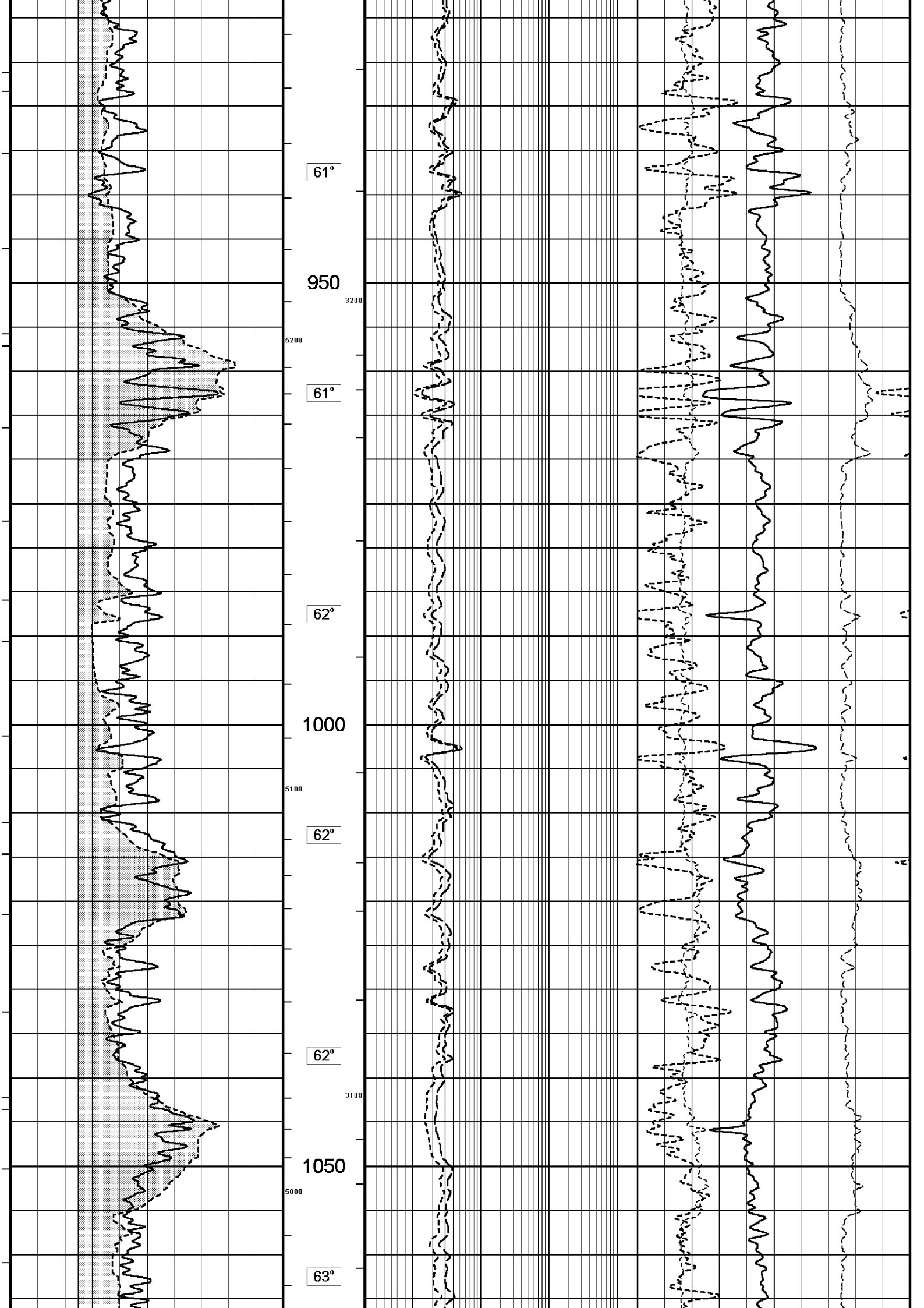
FIELD FINAL LOGS TO BE CORRELATED TO ANADRILL GAMMA LOG.

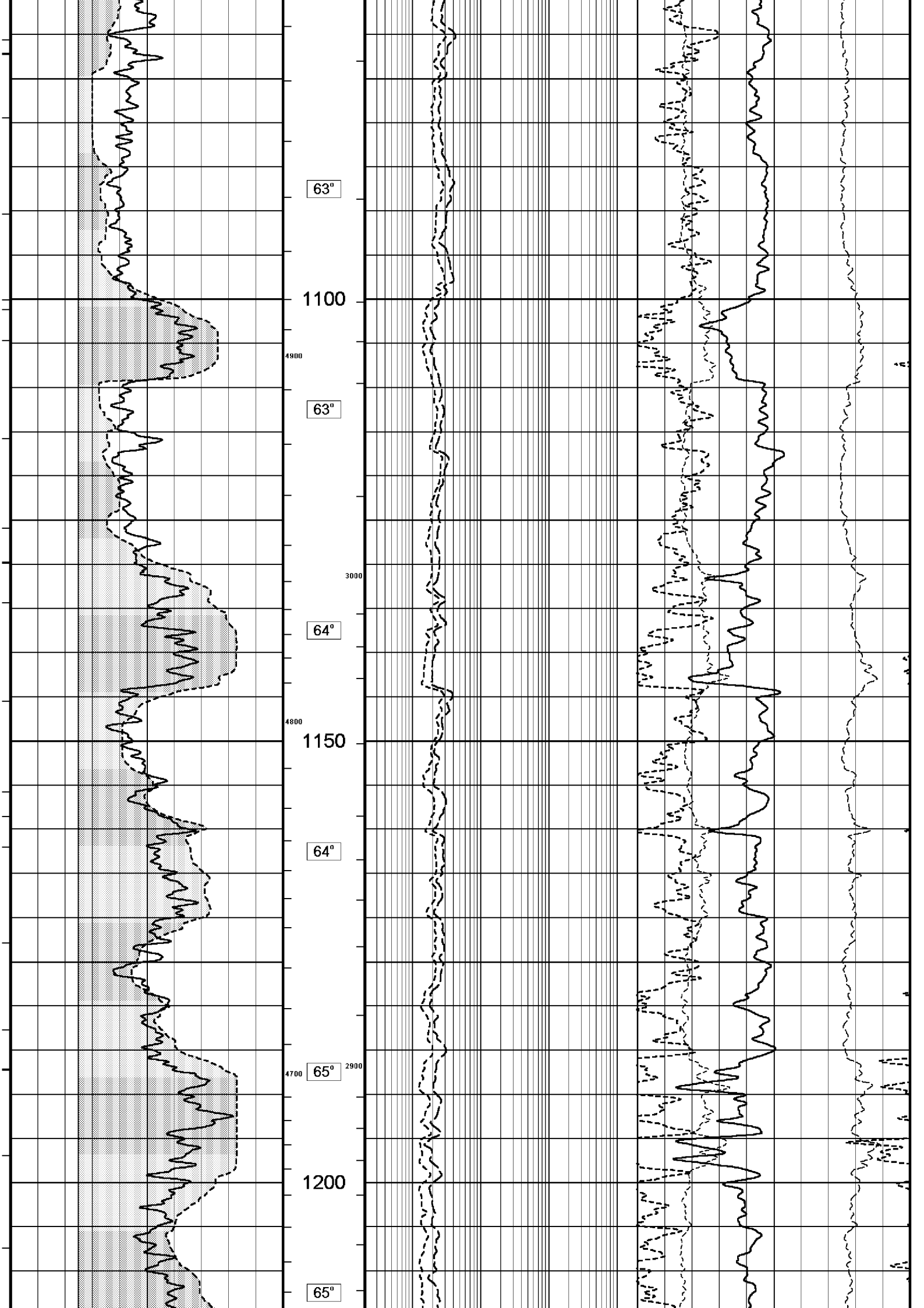
MAX. TEMPERATURE: 91.2 DEG C AT 3211.7 m MD
MAX. INCLINATION: 88.2 DEG AT 1656.24m MD
MAX. DOGLEG SERVERITY: 7.6 DEG/30m AT 881.48 m MD
DEPLOYMENT ANGLE: 67.28 DEG

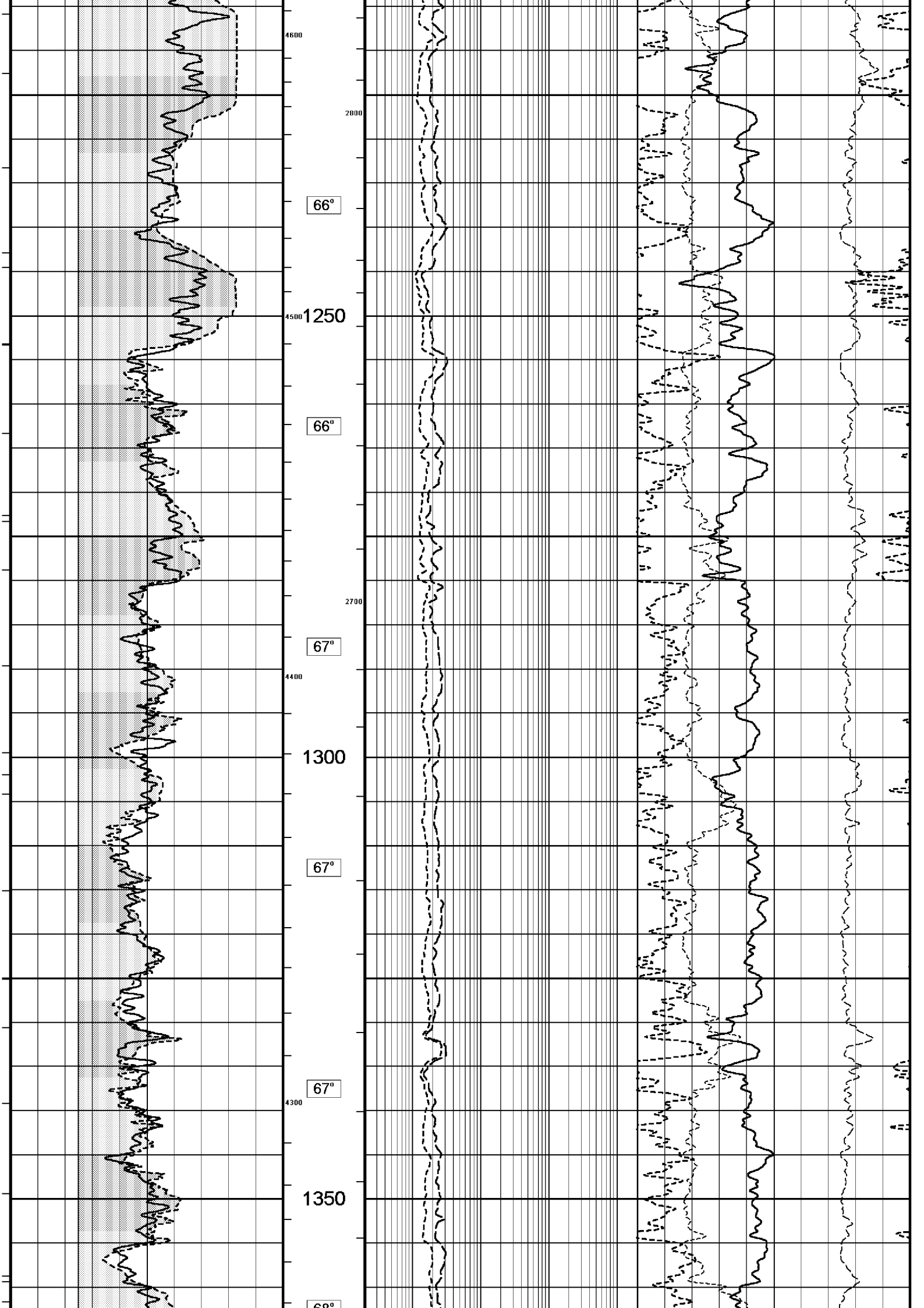
HVOL: 5444 FT^3
AVOL: 3342 FT^3

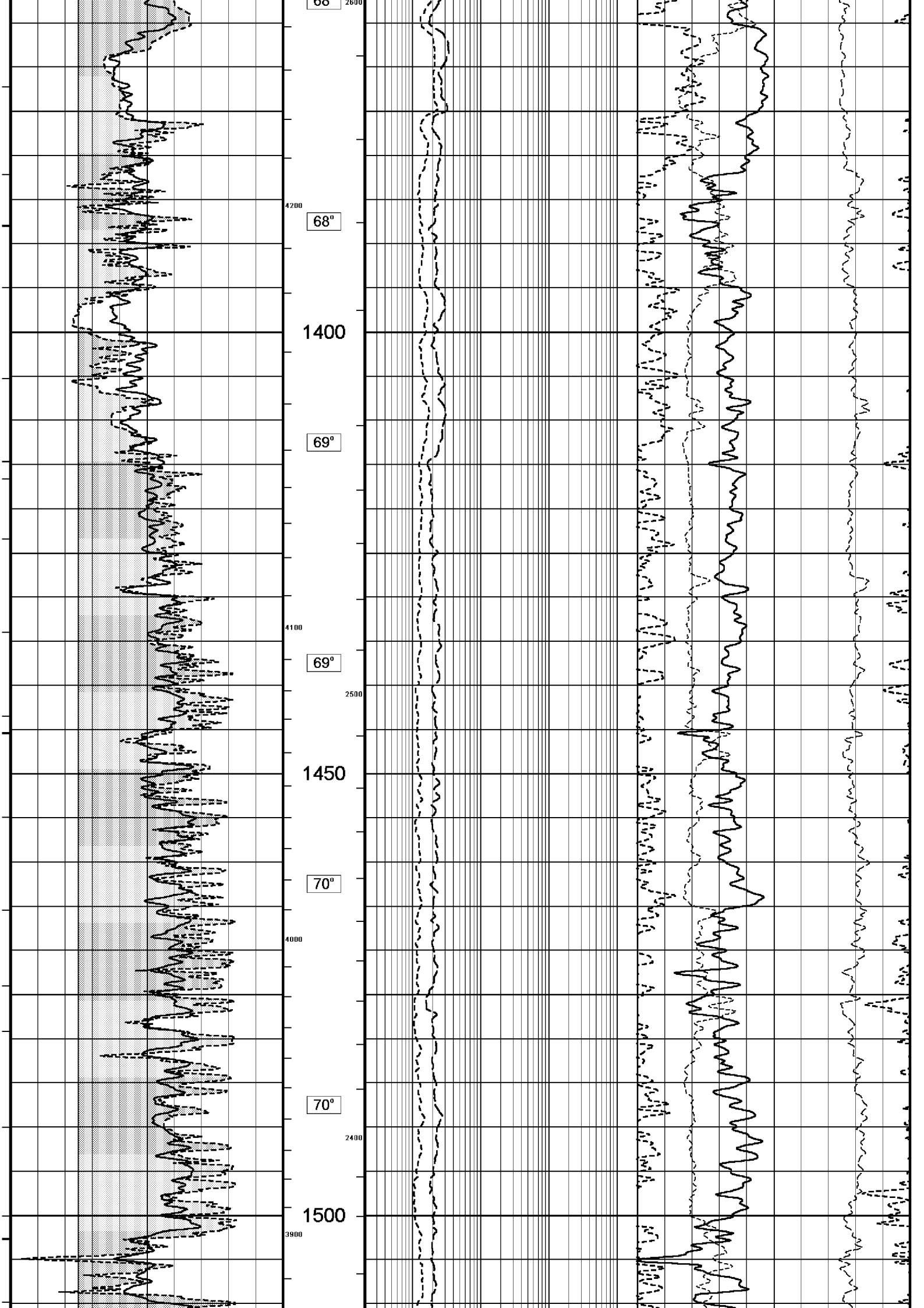
HVOL (TO 2200mMD) : 2015 FT^3
AVOL (TO 2200mMD) : 1106 FT^3

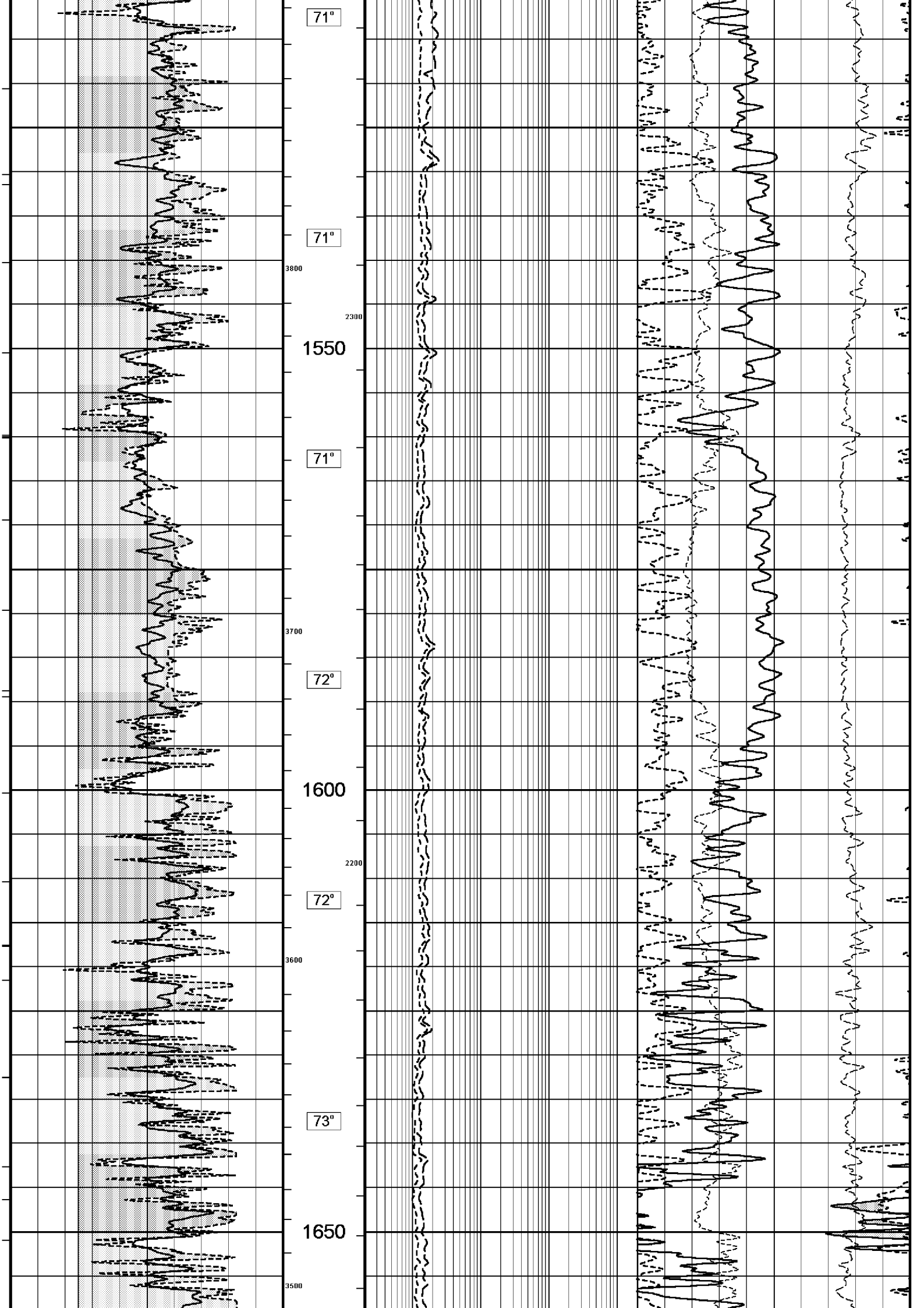
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or

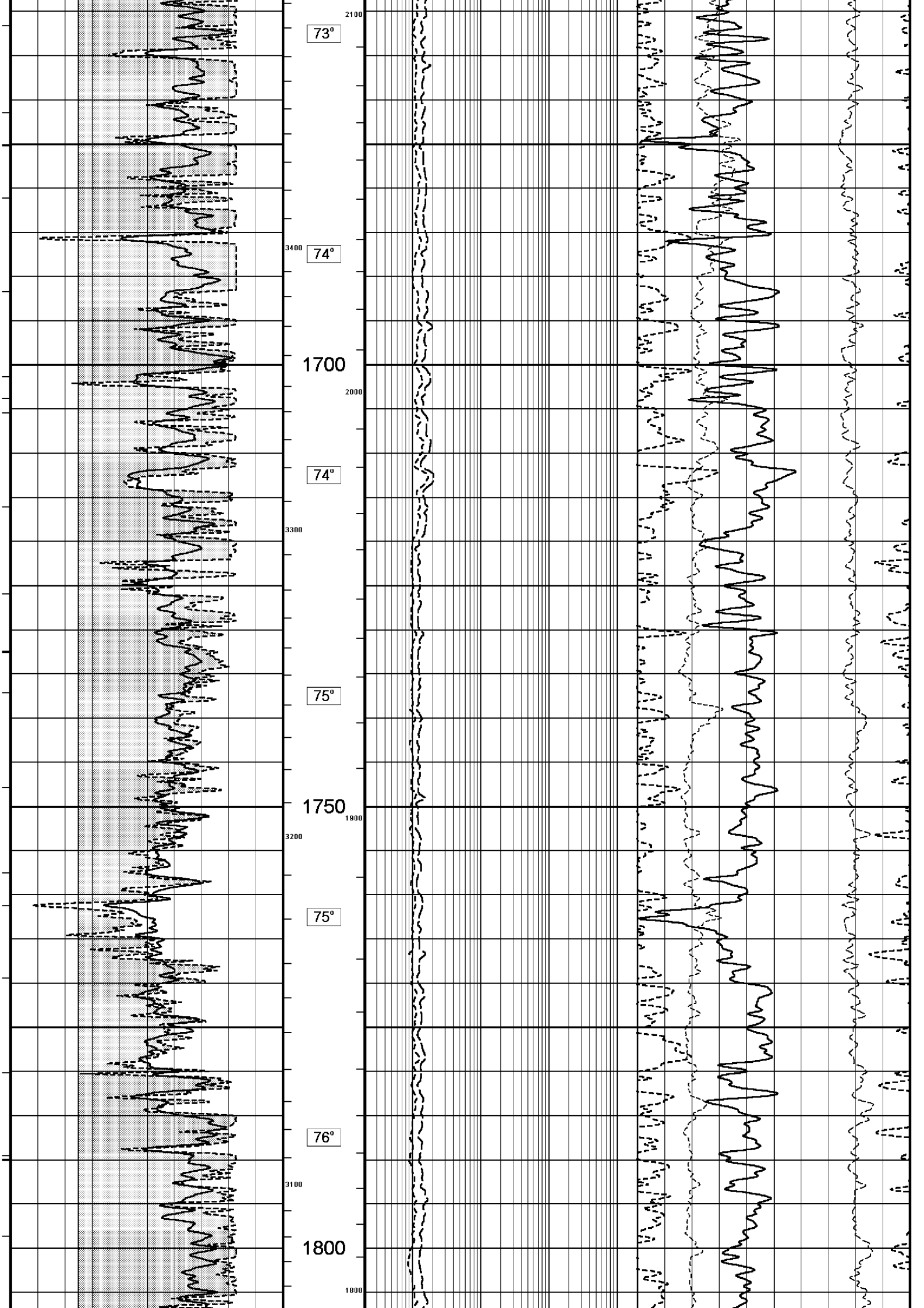


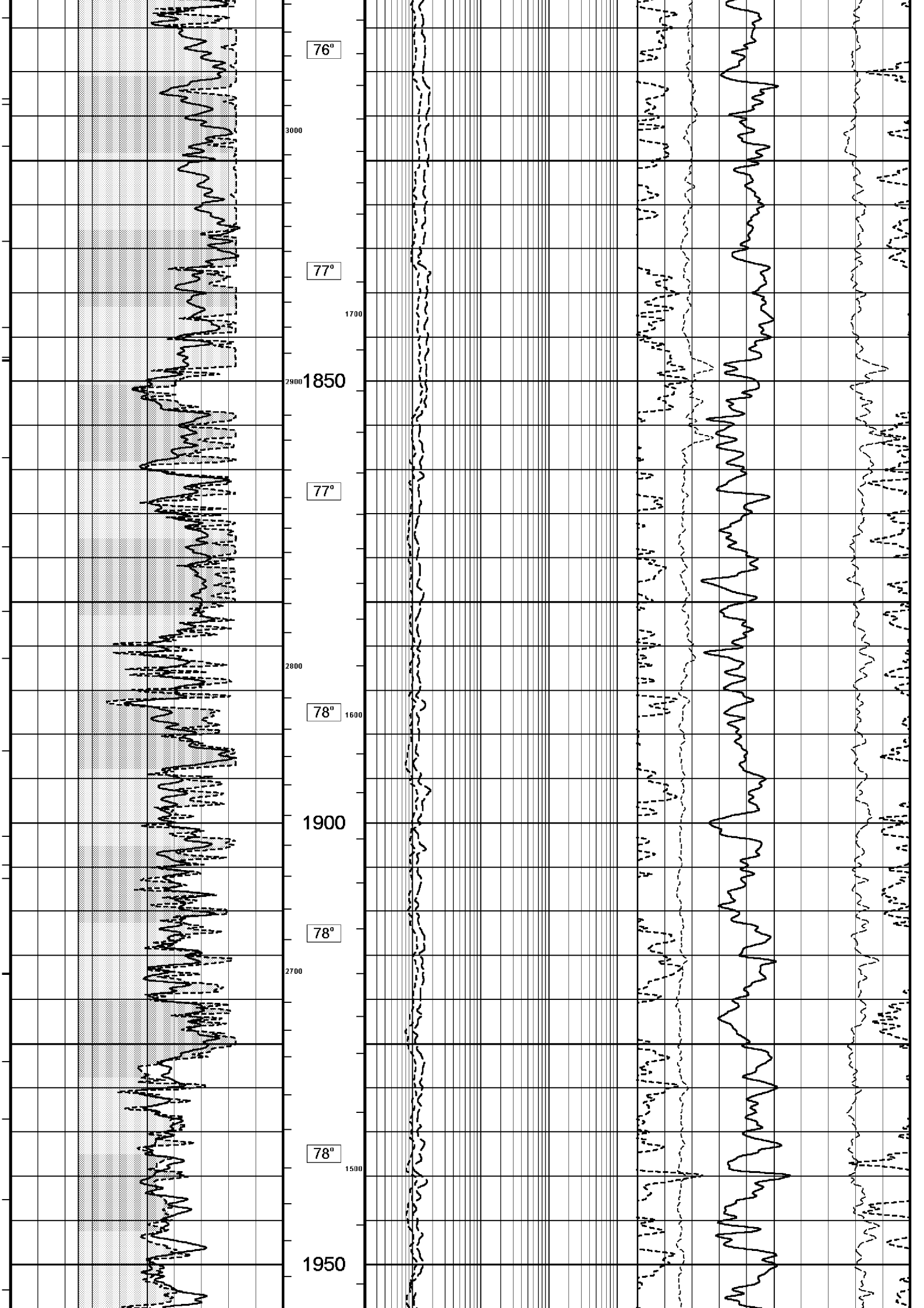


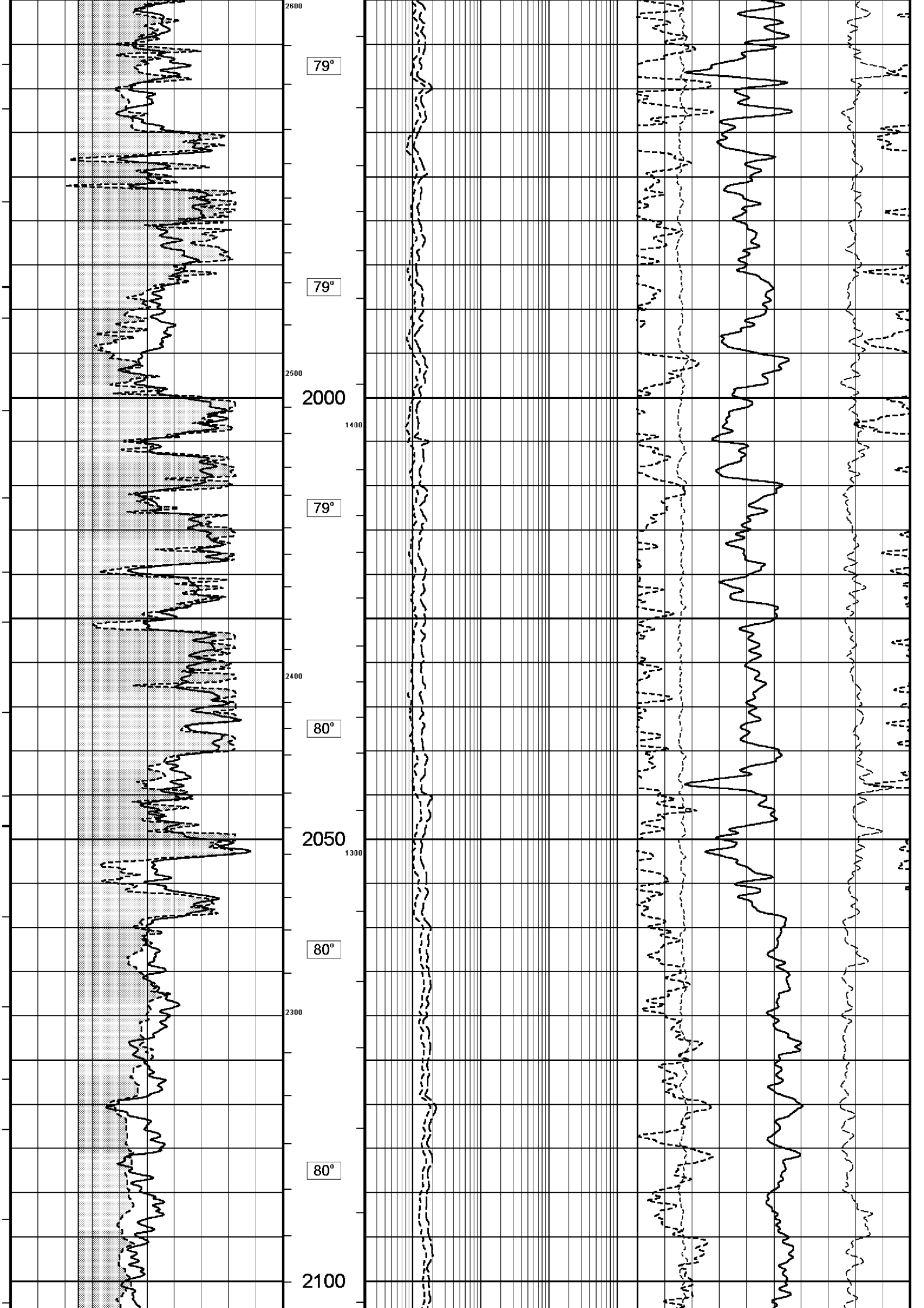


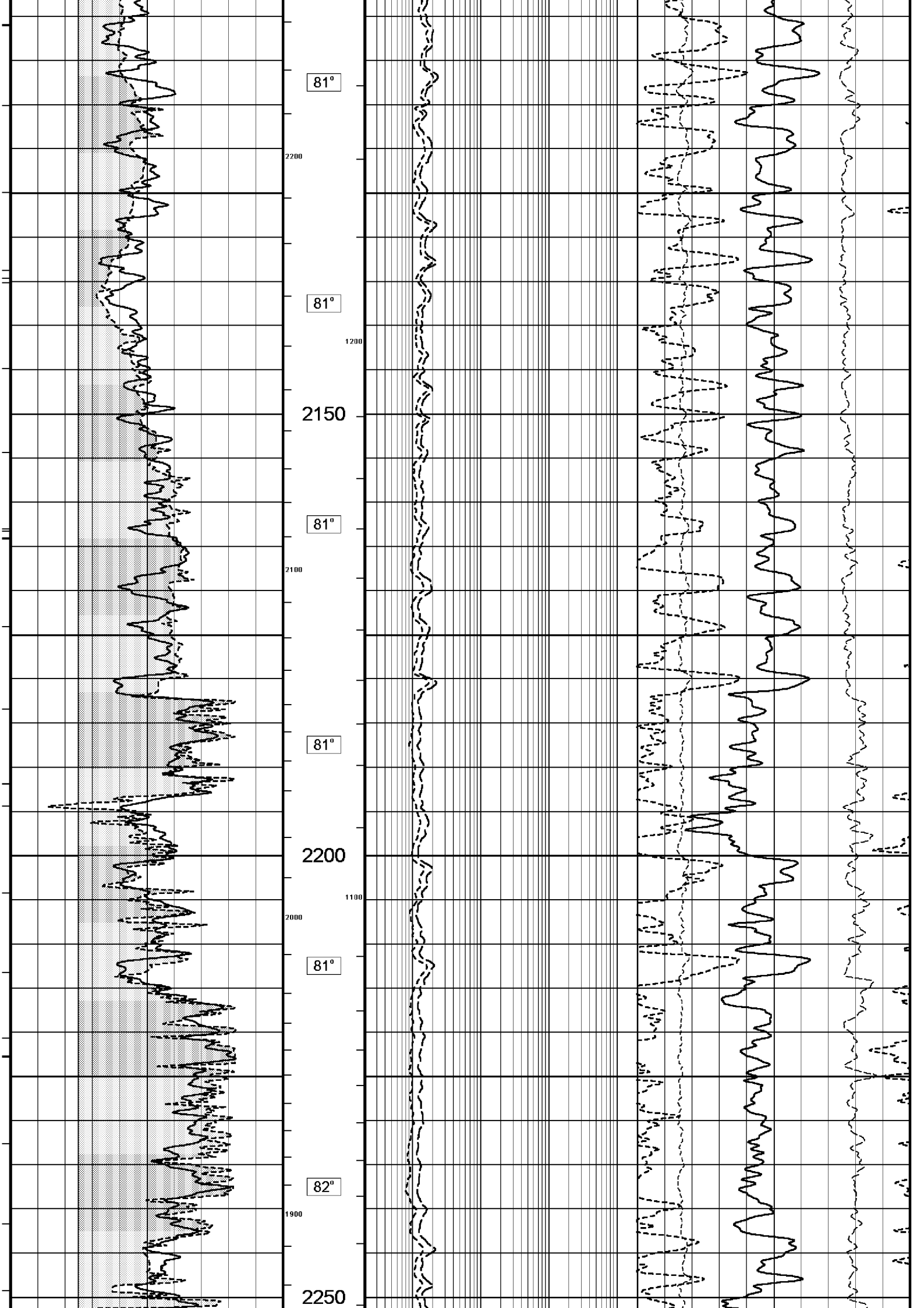


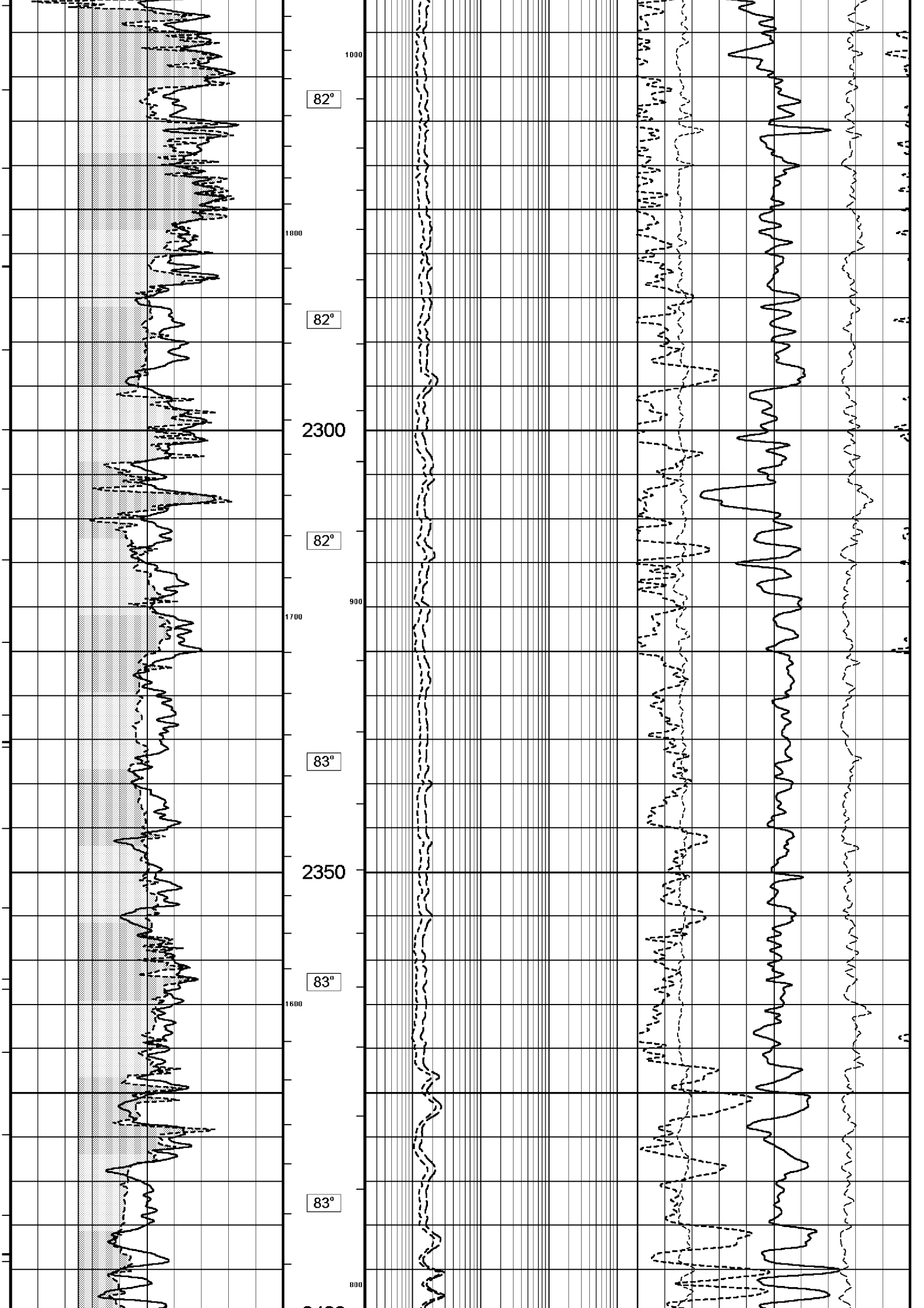


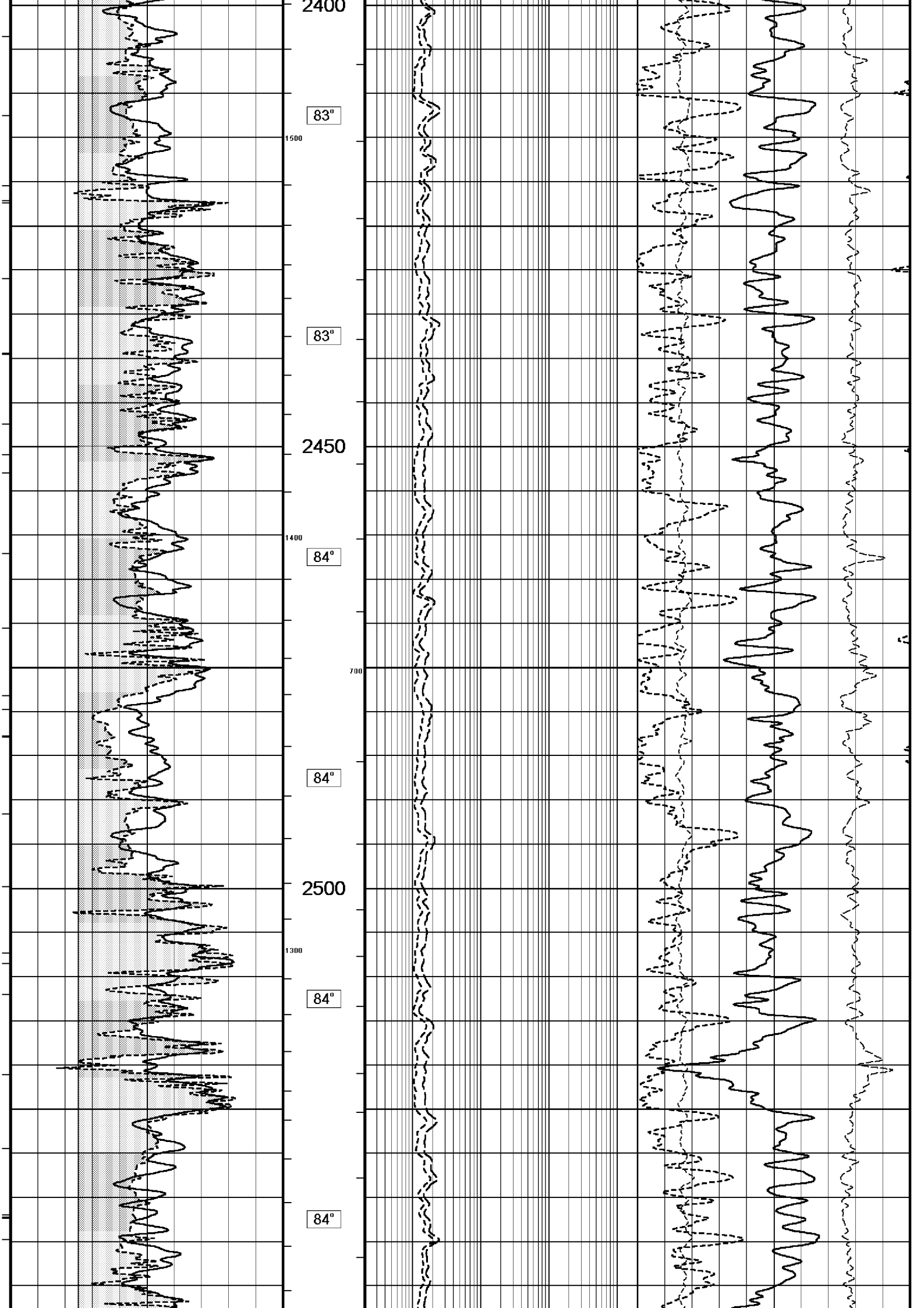


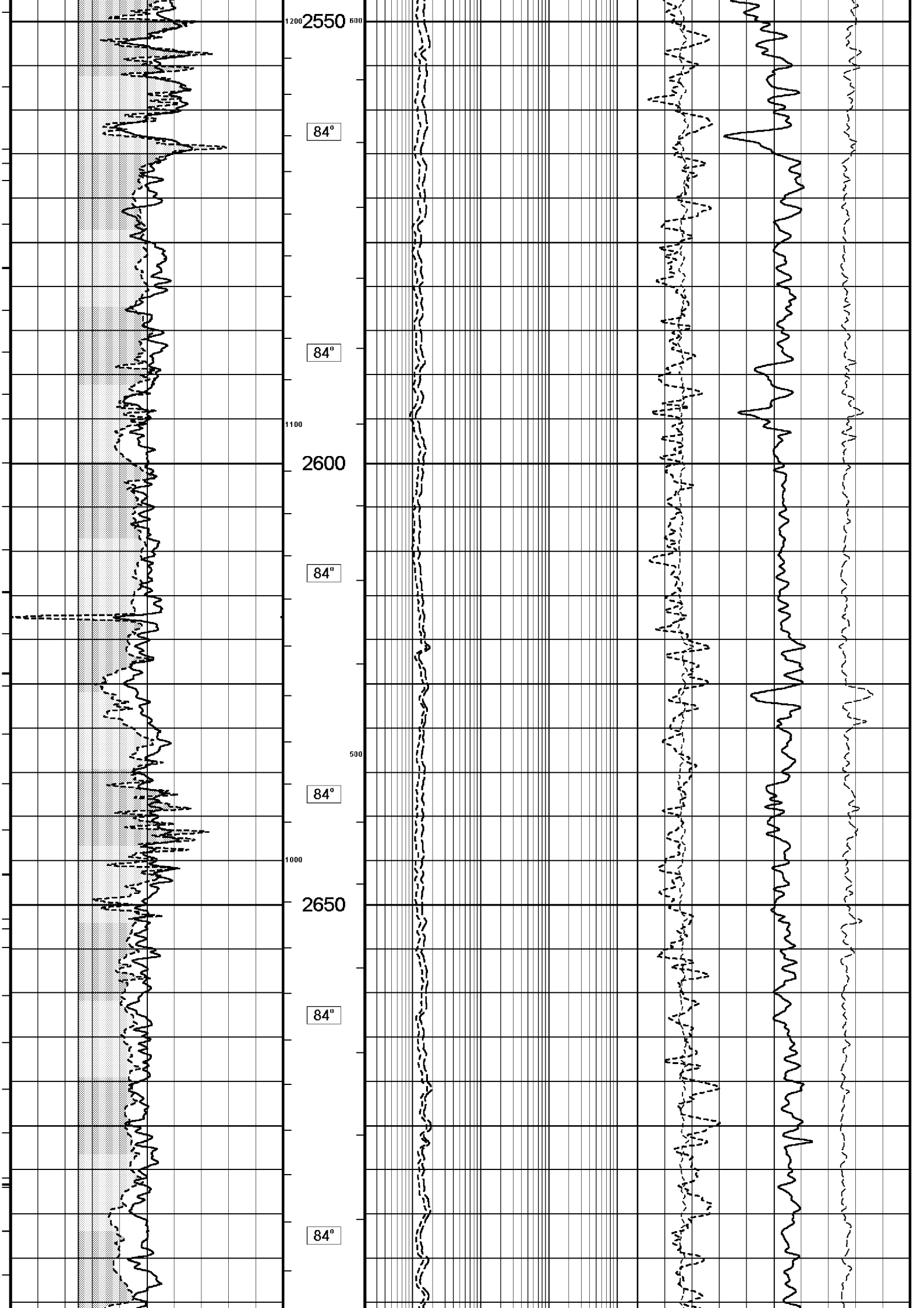


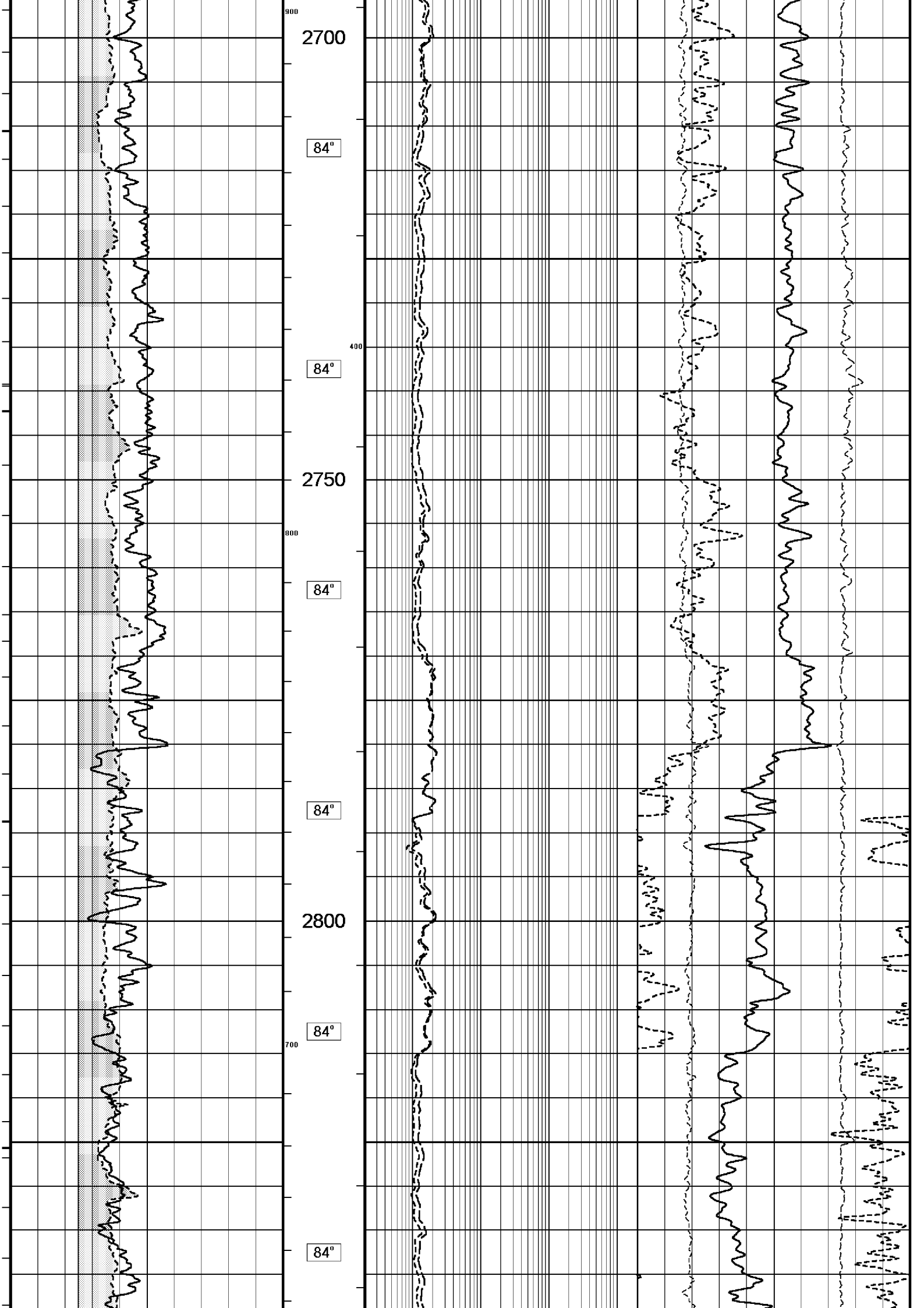


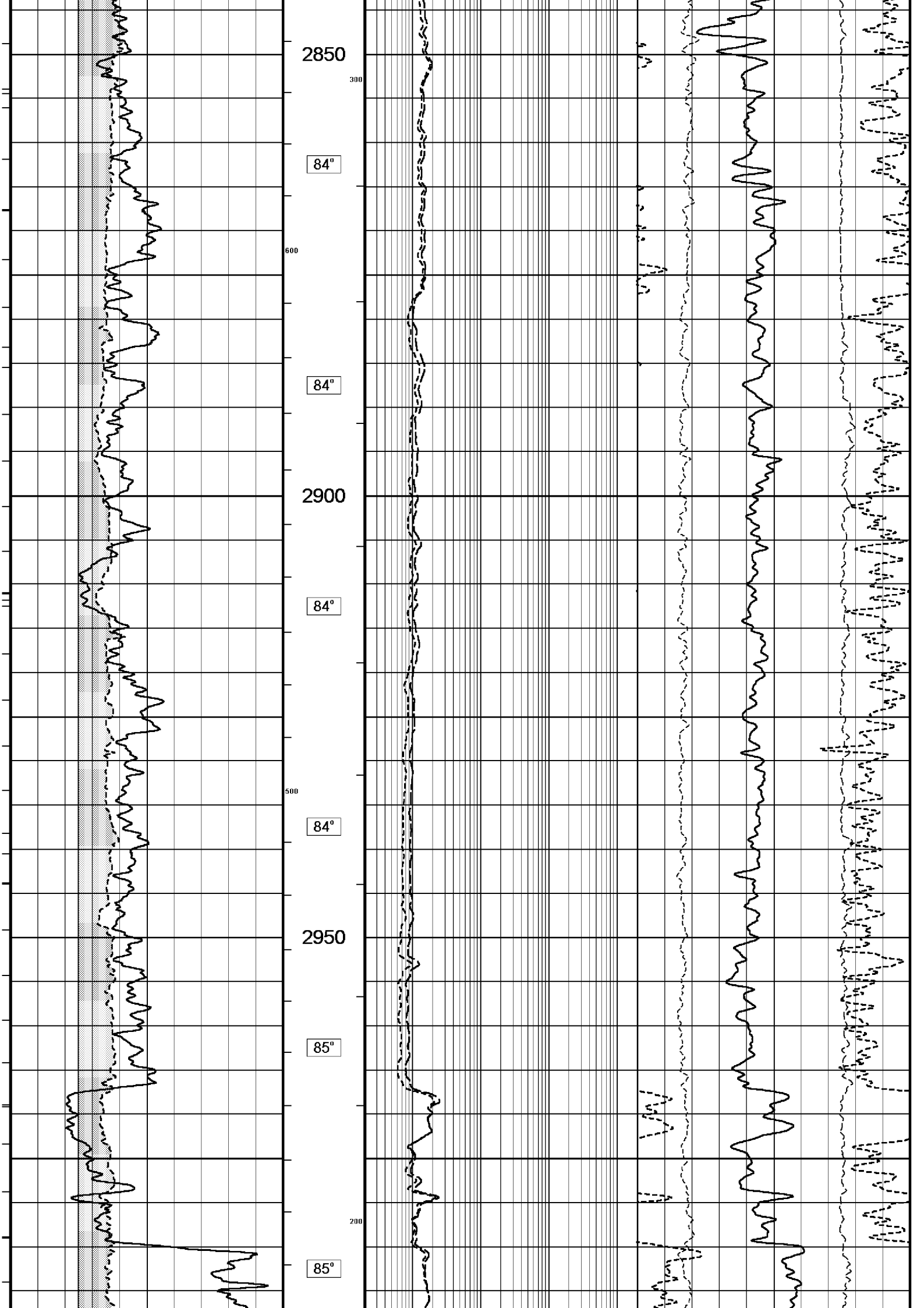


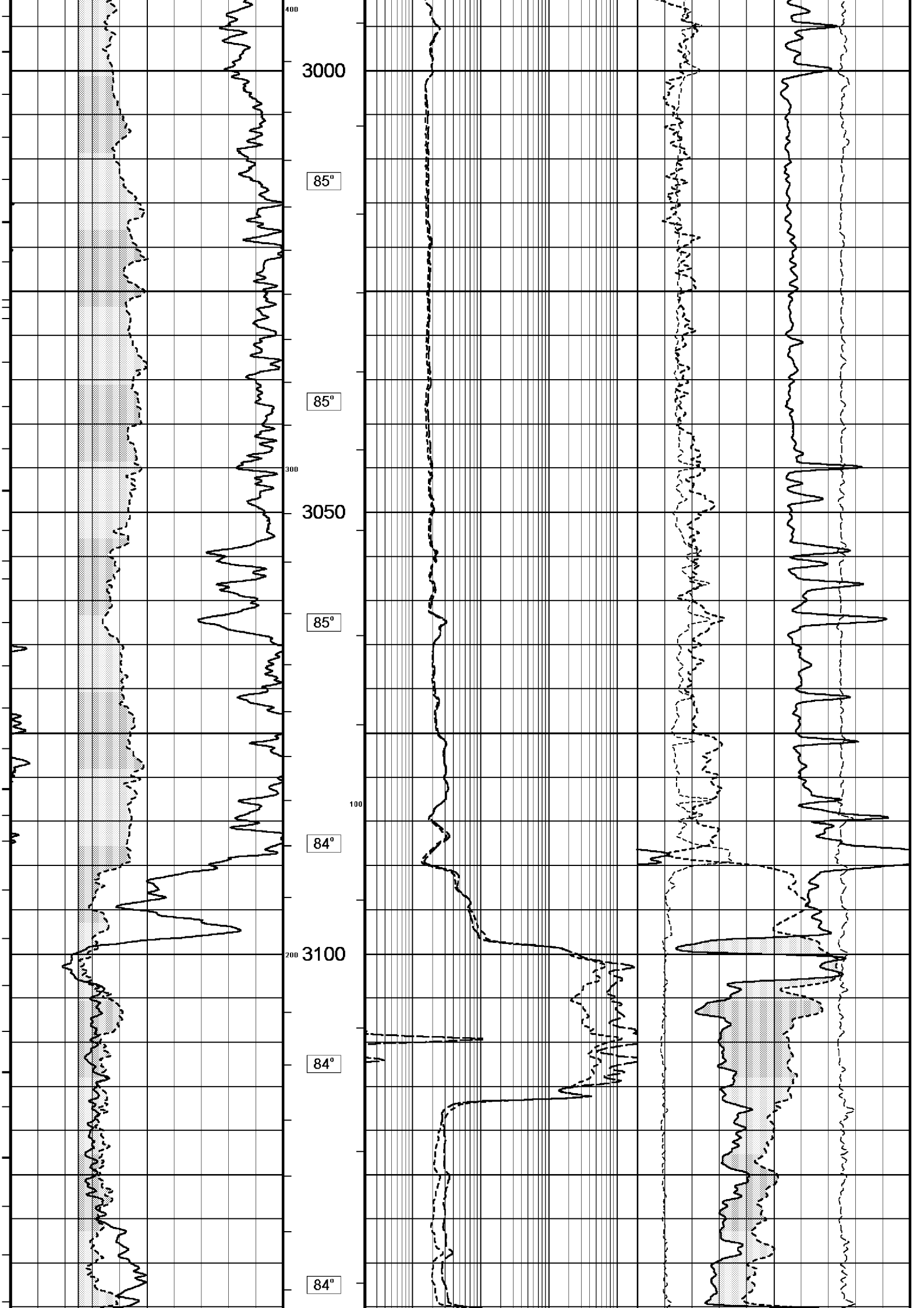


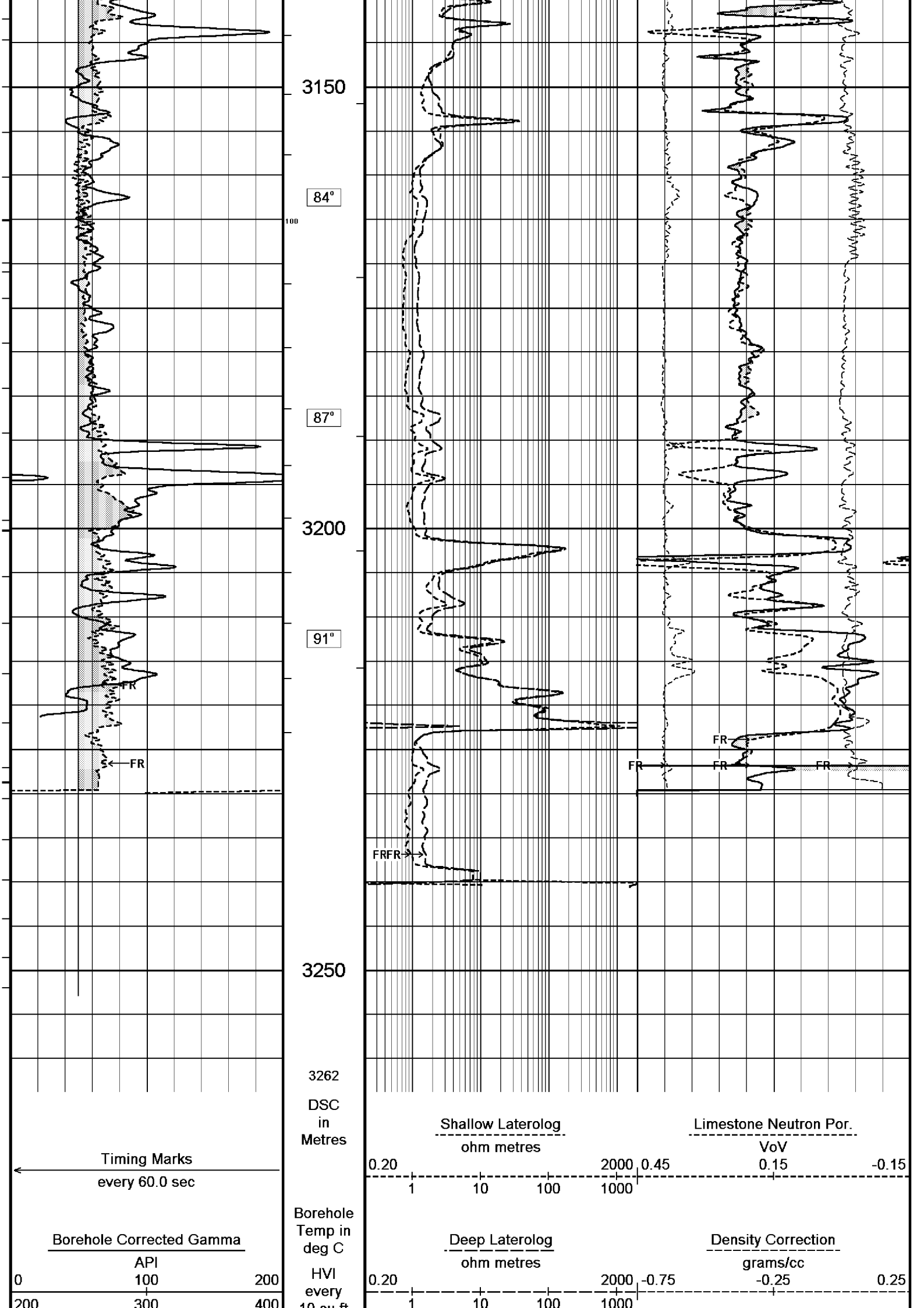


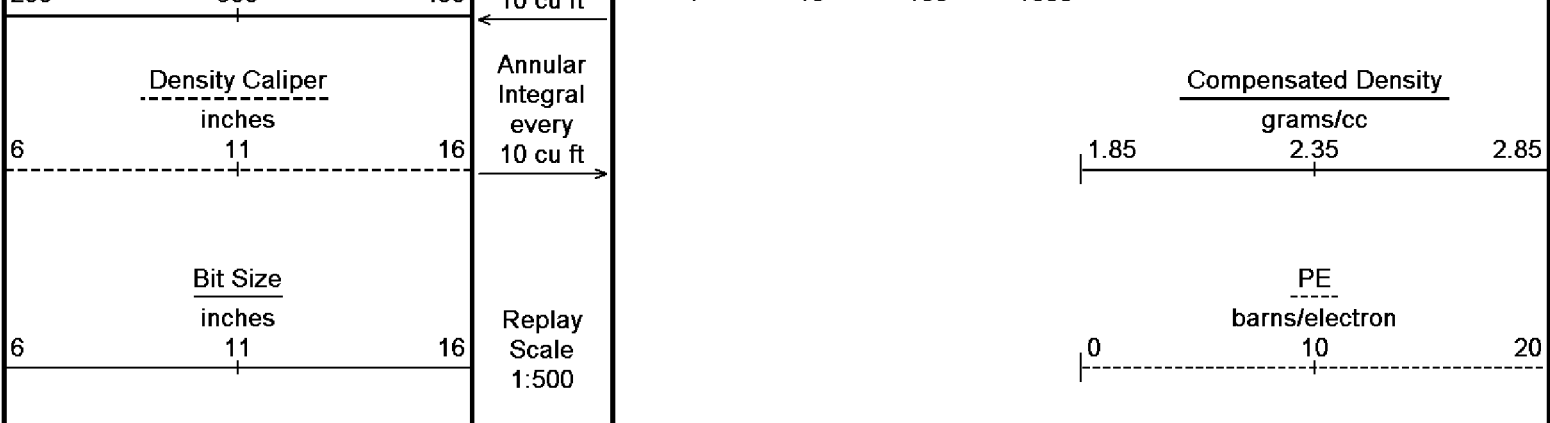












Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 15-FEB-2006 05:58
 Filename: C:\logs\BMA_A6A\FIELD DATA\BMA_A6A_MAIN_LOG2.dta Recorded on 14-FEB-2006 22:51
 System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

↑ MAIN LOG 1:500 ↑

BEFORE SURVEY CALIBRATION
 C:\logs\BMA_A6A\FIELD DATA\BMA_A6A_MAIN_LOG.dta

General Constants All 000

General Parameters		
Mud Resistivity	0.108	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 11-FEB-2006,19:18

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

High Resolution Temperature Constants MCG 142

Pre-filter Length	11
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Gamma Calibration MCG 142 Field Calibration on 11-FEB-2006 19:18

	Measured	Calibrated (API)
Background	14	9
Calibrator (Gross)	1390	918
Calibrator (Net)	1376	909

Gamma Constants MCG 142

Gamma Calibrator Number	060	
Mud Density	1.20	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Centred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN 085 Base Calibration on 1-FEB-2006 16:54
Field Check on 11-FEB-2006 20:00

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
Ratio	3219	99	3714	110

Ratio	32.471	33.764
Field Calibrator at Base	Calibrated (cps)	
	1634	2381
Ratio	0.686	
Field Check	Calibrated (cps)	
	1505	2215
Ratio	0.679	

Neutron Constants MDN 085

Neutron Source Id	NSN-E-739	
Neutron Jig Number	052	
Epithermal Neutron	No	
Caliper Source for Processing	Bit Size	
Stand-off	0.00	inches
Mud Density	1.20	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	47.60	kppm
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Caliper Calibration MPD 083

Base Calibration on 2-FEB-2006 16:03
Field Calibration on 11-FEB-2006 20:04

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	13840	4.01
2	22033	5.99
3	30543	7.98
4	38960	9.94
5	48464	12.01
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	7.79	7.98

Photo Density Calibration MPD 083

Base Calibration on 2-FEB-2006 15:49
Field Check on 11-FEB-2006 20:09

Density Calibration					
Base Calibration		Measured		Calibrated (sdu)	
		Near	Far	Near	Far
Reference 1	55794	18595	18595	53111	19310
Reference 2	26195	2459	2459	24951	2530
Field Check at Base					
	945.3	1090.3			
Field Check					
	946.6	1090.8			
PE Calibration					
Base Calibration		Measured		Calibrated	
	WS	WH	Ratio	Ratio	
Background	180	810			
Reference 1	17391	55601	0.314	0.320	
Reference 2	6877	26048	0.265	0.273	
Field Check at Base					
	179.5	810.3			
Field Check					
	179.8	811.1			

Density Constants MPD 083

Density Source Id	NSD-L-242
Nylon Calibrator Number	DNC-D-536
Aluminium/Fe Calibrator Number	DAC-D-536

Aluminum/Fe Calibrator Number	DAC-D-356	
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.20	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 Calibration MLE 031

Base Calibration on 3-FEB-2006 12:19
Field Check on 11-FEB-2006,20:25

Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.8	976.2	13.2	1321.0
Deep	9.8	975.9	7.5	755.0
Groningen	9.8	976.1	8.5	854.0

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	48.6	48.6
Deep	27.8	27.8
Groningen	251.7	251.7

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_A6A\FIELD DATA\BMA_A6A_MAIN_LOG.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

Compact Memory Sub A.C
MMS 38 Length: 0.95 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

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



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

26.17 m NPRL - Limestone Neutron Por.

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 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

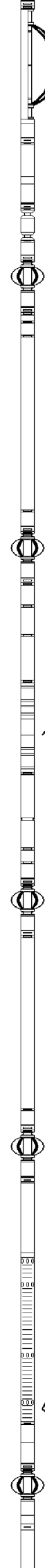
4.60 m TR22 - 5' Transit Time
4.60 m TR11 - 4' Transit Time
4.60 m TR21 - 3' Transit Time
4.60 m TR12 - 6' Transit Time

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

4.60 m DT35 - 3-5' Compensated Sonic

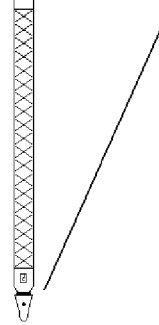
Compact Induction
MAI 39 Length: 3.29 m Weight: 48.5 lb

Tool Zero (0.44m from bottom)



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


Total Length: 54.01 m Weight: 1201.5 lb



All measurements relative to tool zero.

COMPANY	ESSO AUSTRALIA PTY LTD
WELL	BREAM A6A
FIELD	BREAM
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing		metres	First Reading	3246.00	metres
Elevation Drill Floor	32.82	metres	Depth Driller	3256.00	metres
Elevation Ground Level	-59.40	metres	Depth Logger	3253.00	metres

 Compact	DUAL LATEROLOG - GR
	DENSITY - NEUTRON
	1:500 MD