

# Reeves

## Compact

Dual Laterolog  
Gamma Ray

1:500 MD

COMPANY	ESSO AUSTRALIA PTY. LTD.		
WELL	MARLIN A24A		
FIELD	TURRUM		
PROVINCE/COUNTY	BASS STRAIT		
COUNTRY/STATE	AUSTRALIA		
LOCATION	38Deg13'49.203"S, 148Deg13'15.554"E N 5767923.720 m, E 606865.170 m		
LSD	SEC	TWP	RGE
API Number	Other Services		Photo Density
Permit Number VIC/L11	Compensated Neutron		Compensated Sonic
Permanent Datum MSL	, Elevation 0.0 metres		
Log Measured From RT@27.91 m	above Permanent Datum		
Drilling Measured From RT			
Date	5-MAY-2004		
Run Number	ONE		
Depth Driller	3275.00	metres	
Depth Logger	3270.50	metres	
First Reading	3270.12	metres	
Last Reading	2008.50	metres	
Casing Driller	653.00	metres	
Casing Logger			
Bit Size	8.50	inches	
Hole Fluid Type	KCL/GLY/PPA		
Density / Viscosity	10.15 lb/USg	30.00 CP	
PH / Fluid Loss	8.90	3.00 ml/30Min	
Sample Source	PRESS		
Rm @ Measured Temp	0.137 @ 25.0	ohm-m	
Rmf @ Measured Temp	0.098 @ 25.0	ohm-m	
Rmc @ Measured Temp	0.236 @ 25.0	ohm-m	
Source Rmf / Rmc	FLOW	FLOW	
Rm @ BHT	0.066 @ 75.0	ohm-m	
Time Since Circulation	36 HRS		
Max Recorded Temp	90.60	deg C	
Equipment Name	CWS/CML		
Equipment / Base	1	SALE	
Recorded By	G. MCMANUS, N. PATMAN		
Witnessed By	C. MENHENNIT, L. CULLEN		
Circ. Stopped	1400 4-MAY		

### BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	653.000	3275.000

### CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
SURFACE	13.375	0.000	653.000	0.00
L80	9.625	0.000	653.000	47.00

### REMARKS

\*\*\*Miss Run - No data collected above 2008.5 m MD Due To Battery Failure\*\*\*

Rig Nabors 453

5" SHUTTLE - MEMORY LOGGING

5-MAY-04

Crew: G McManus, N Patman, M Susa, B Goodwin

Logs depth corrected -1.1m to correlate with Anadrill gamma log.

AVERAGE INCLINATION: 38° FROM WINDOW TO TD

MAXIMUM INCLINATION: 42.38° @ 3162.70 mMD

MAXIMUM DOGLEG SERVERITY: 5.53°/30m @ 780.54

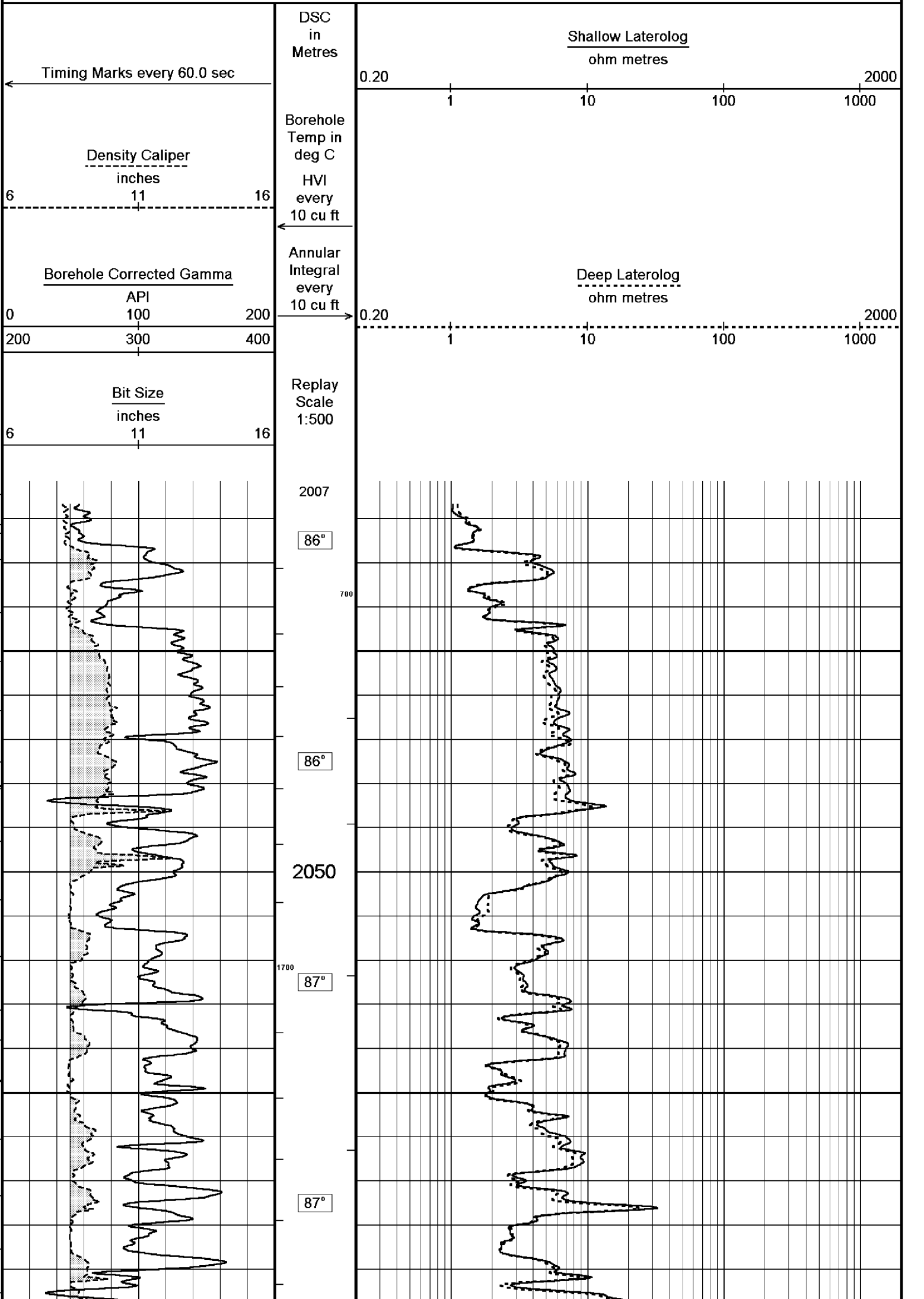
MAXIMUM TEMPERATURE: 90.6°C @ 2654.30 mMD

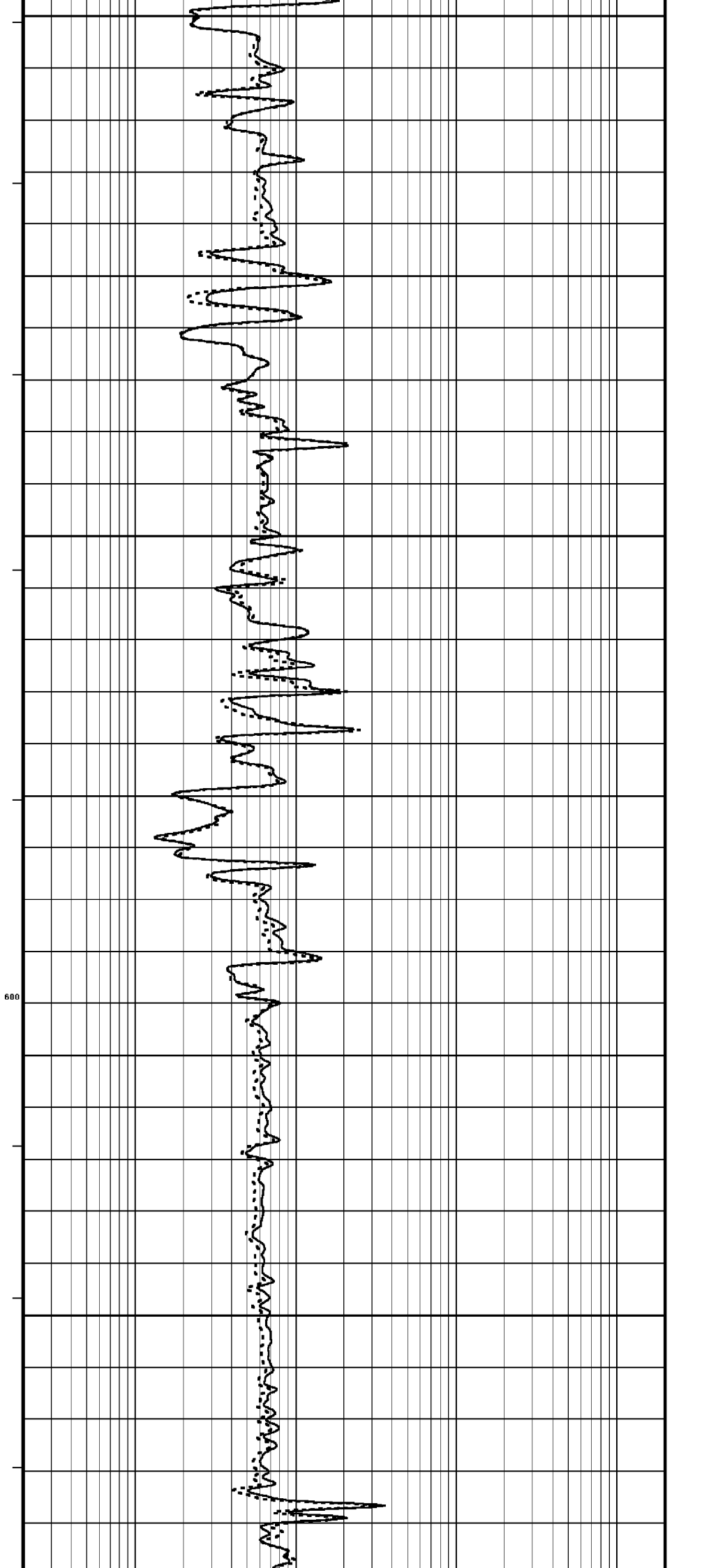
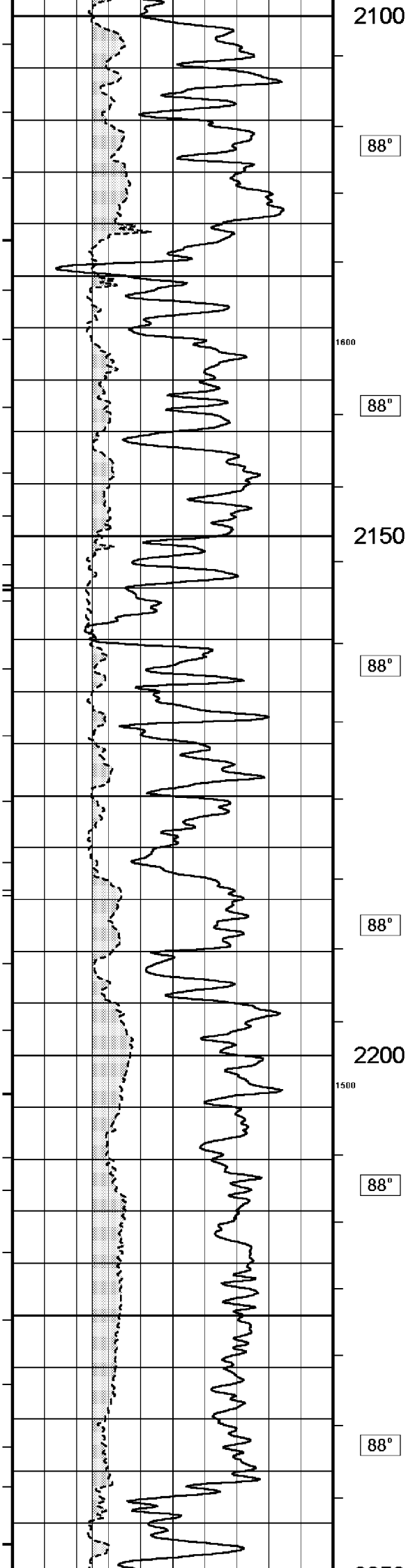
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

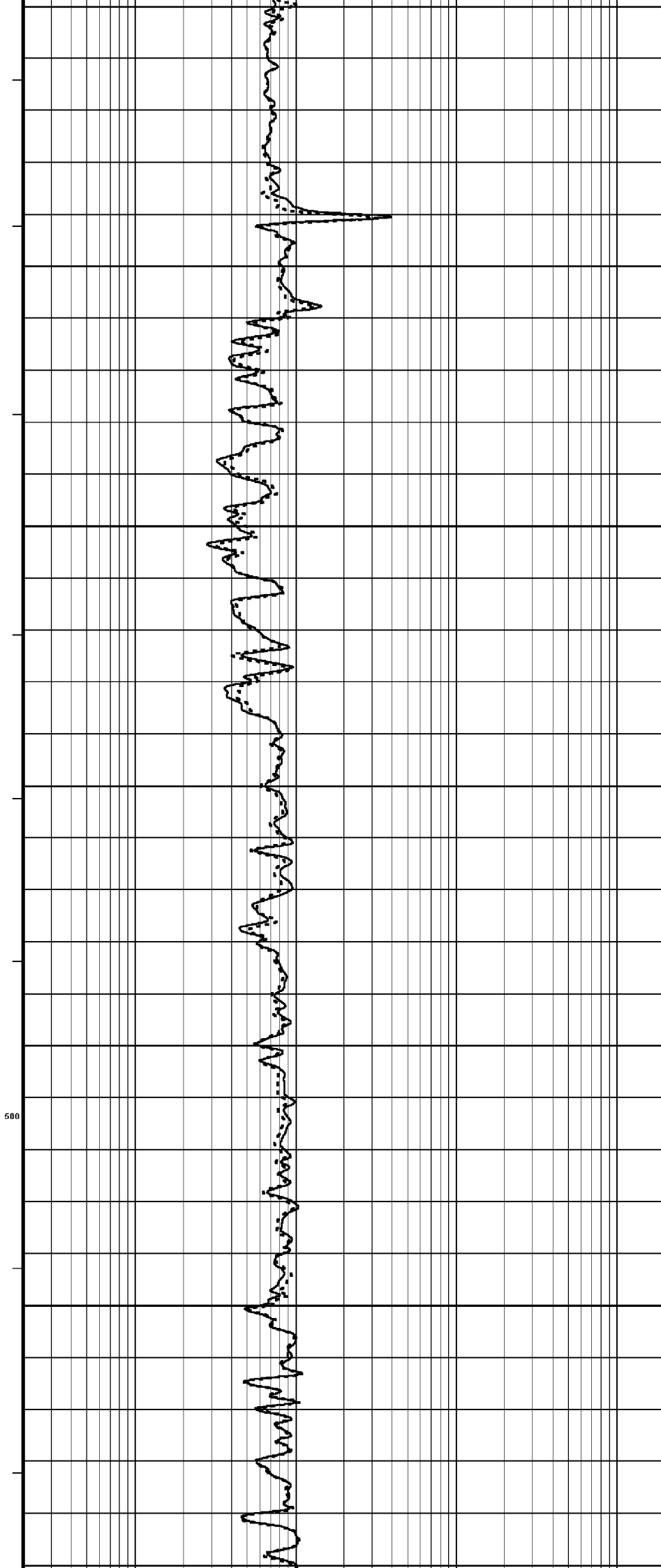
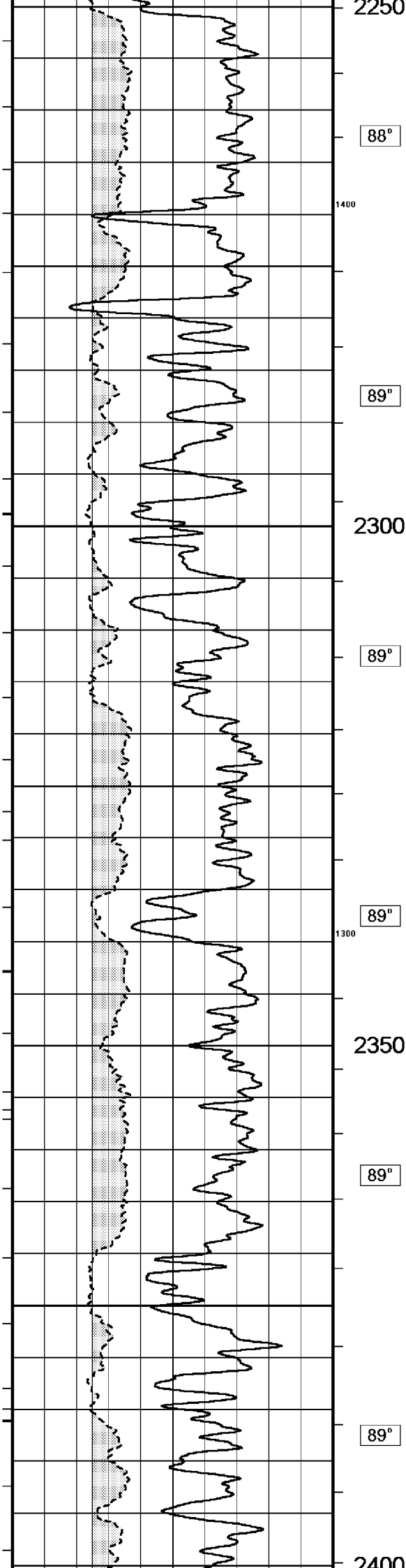
### MAIN LOG 1:500

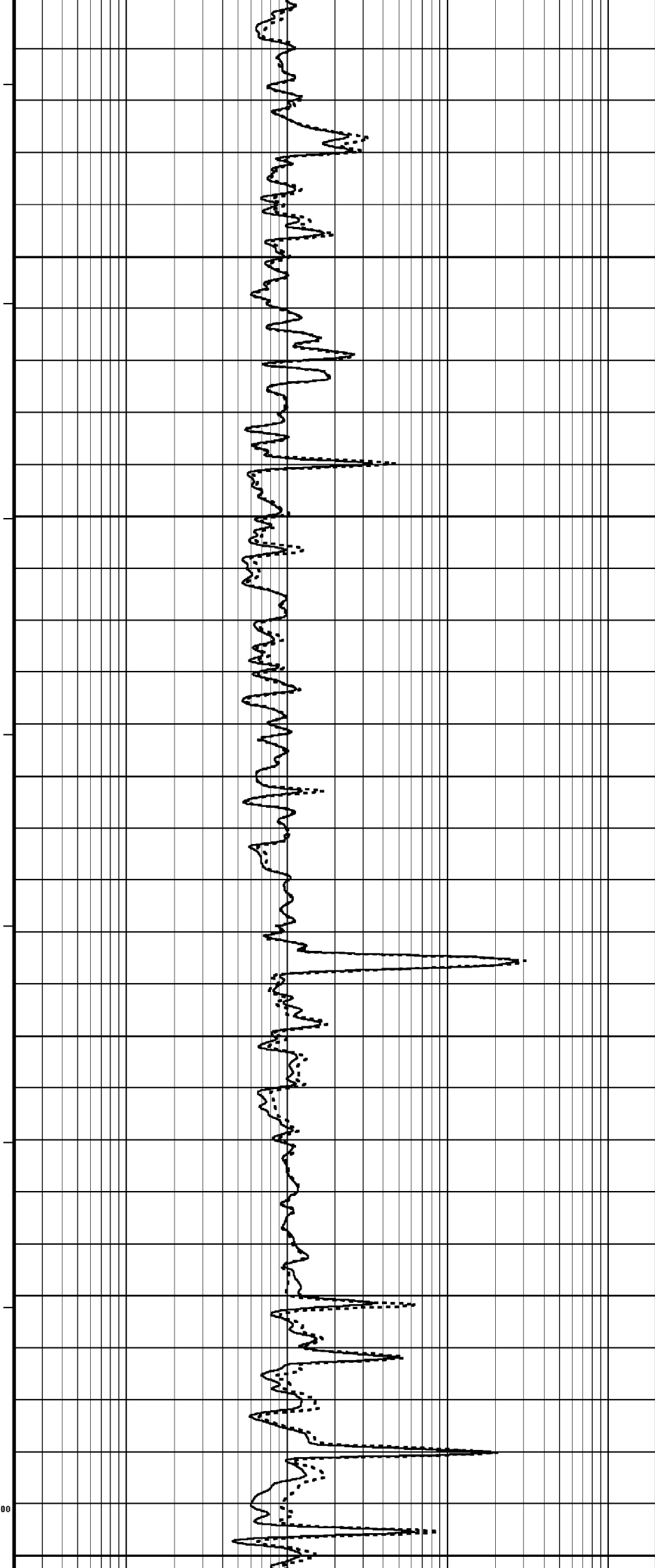
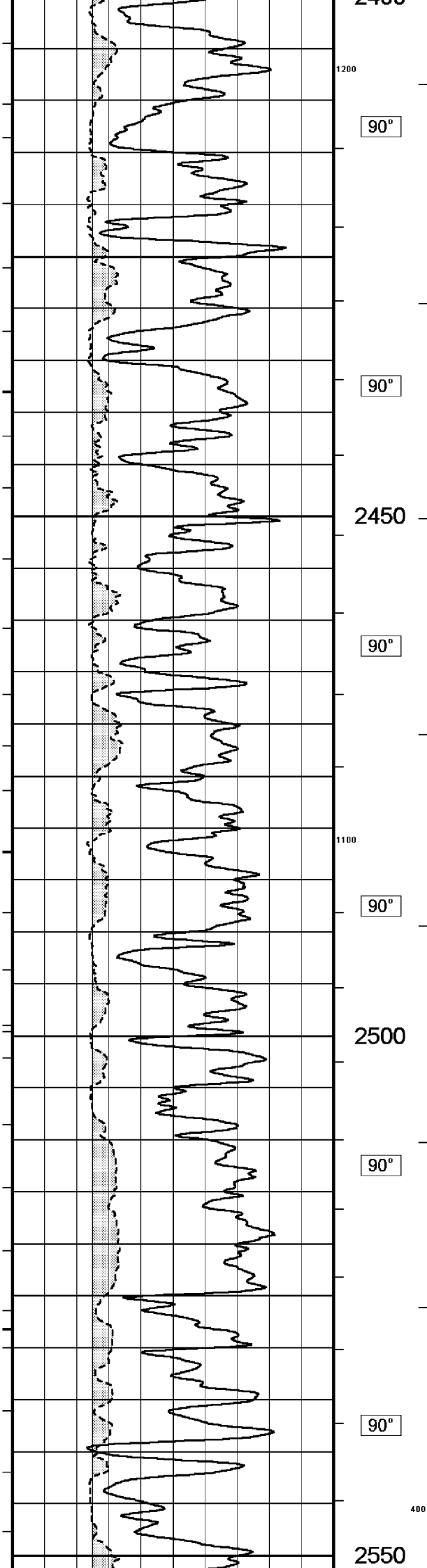
Depth Based Data - Maximum Sampling Increment 10.0cm

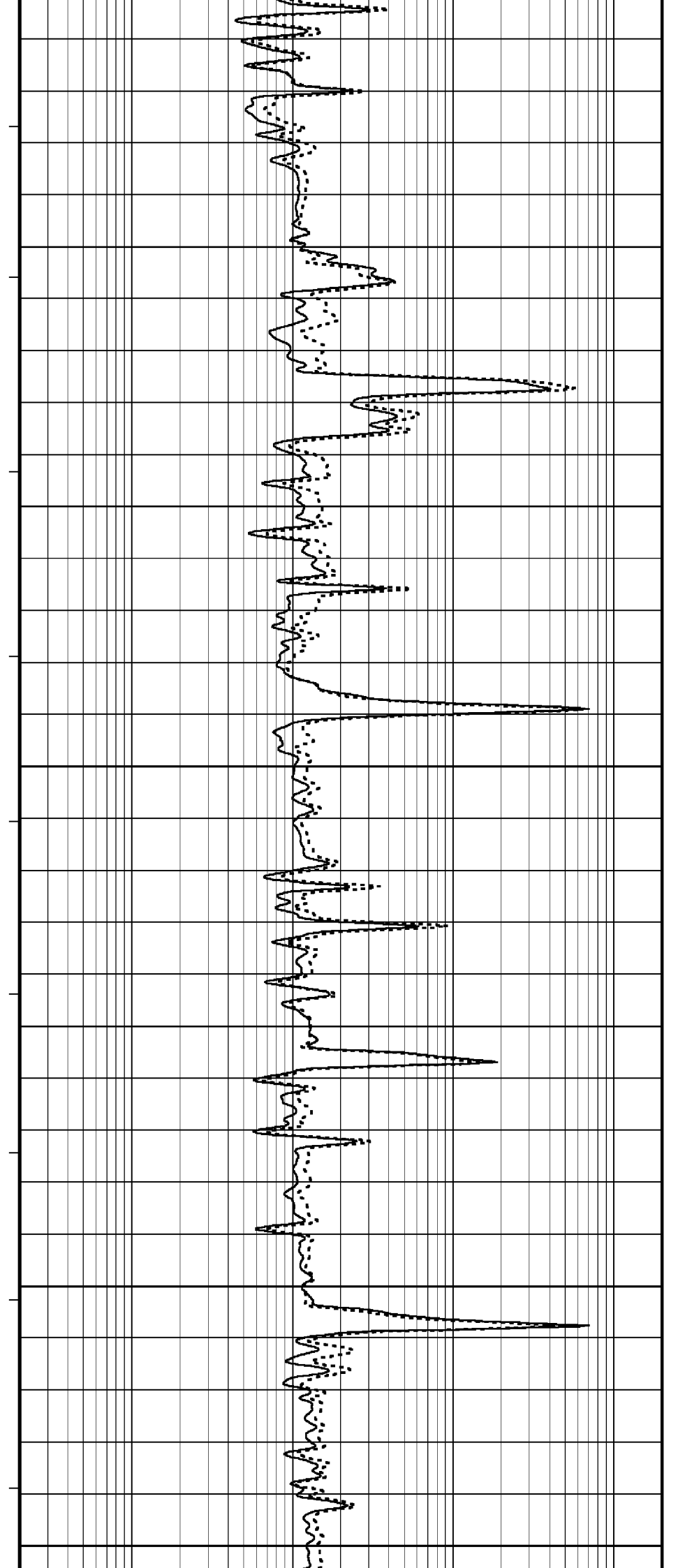
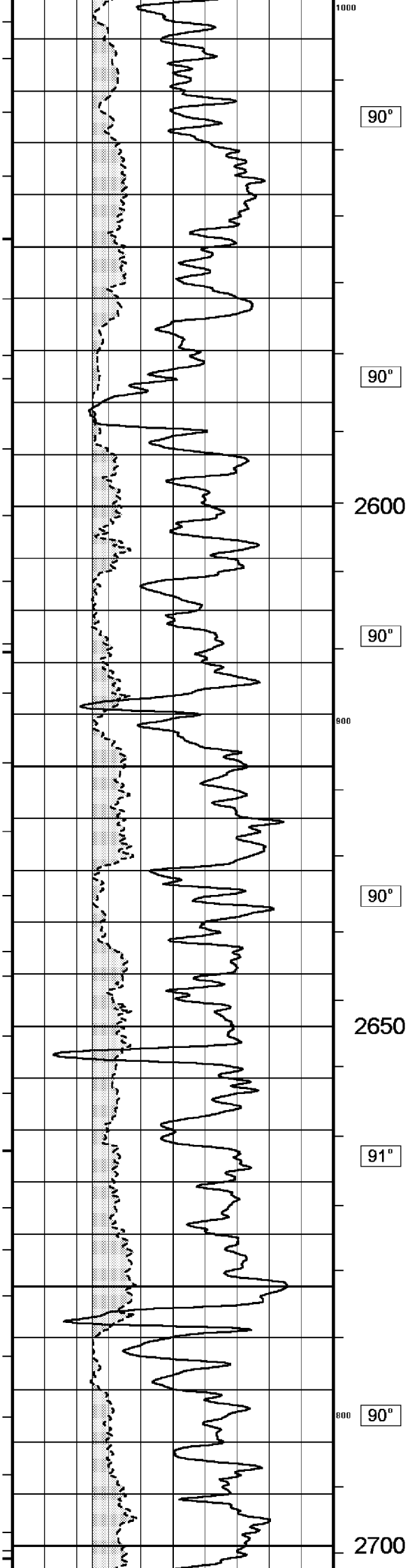
Plotted on 24-SEP-2004 13:22

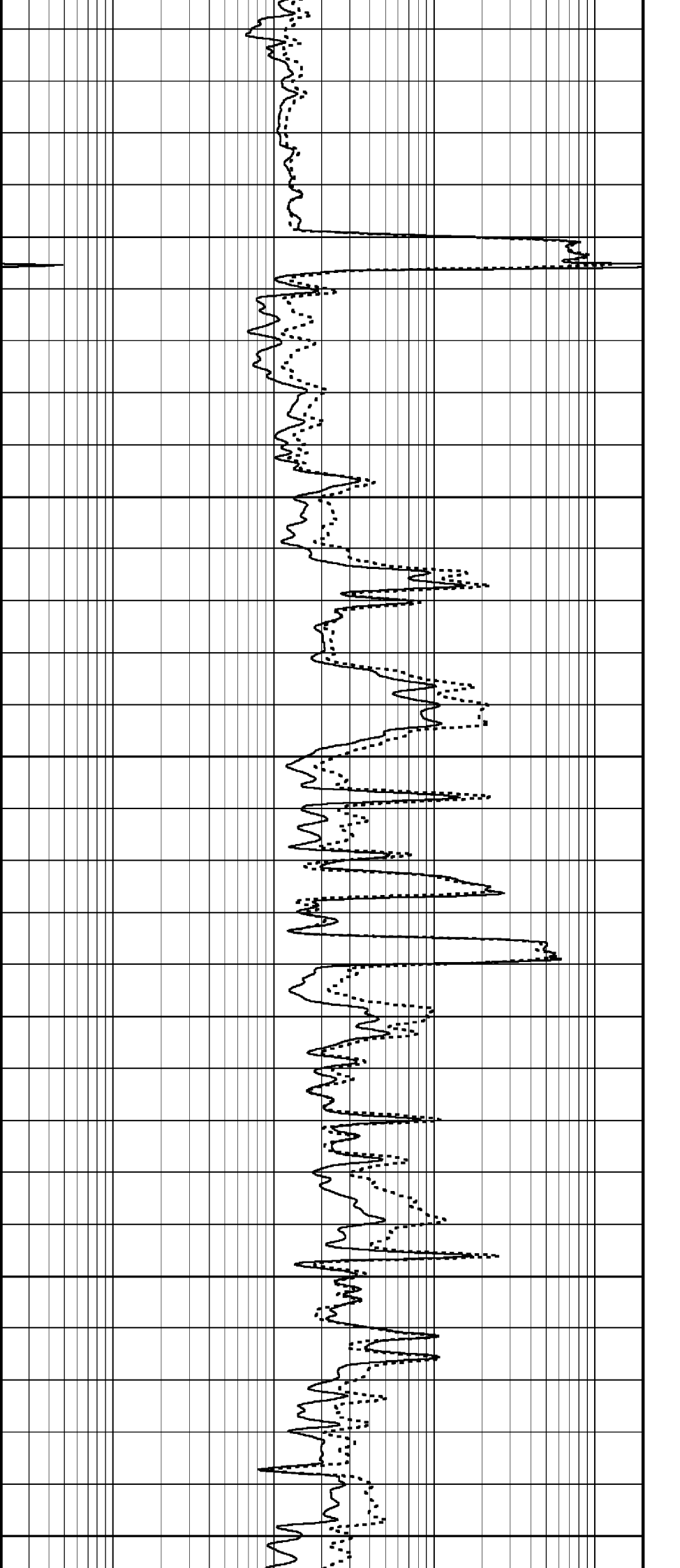
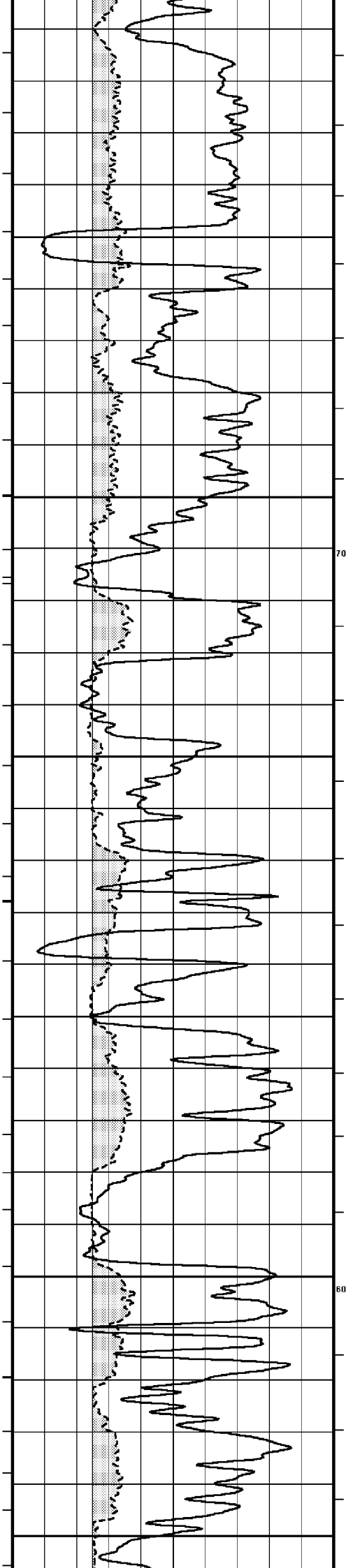


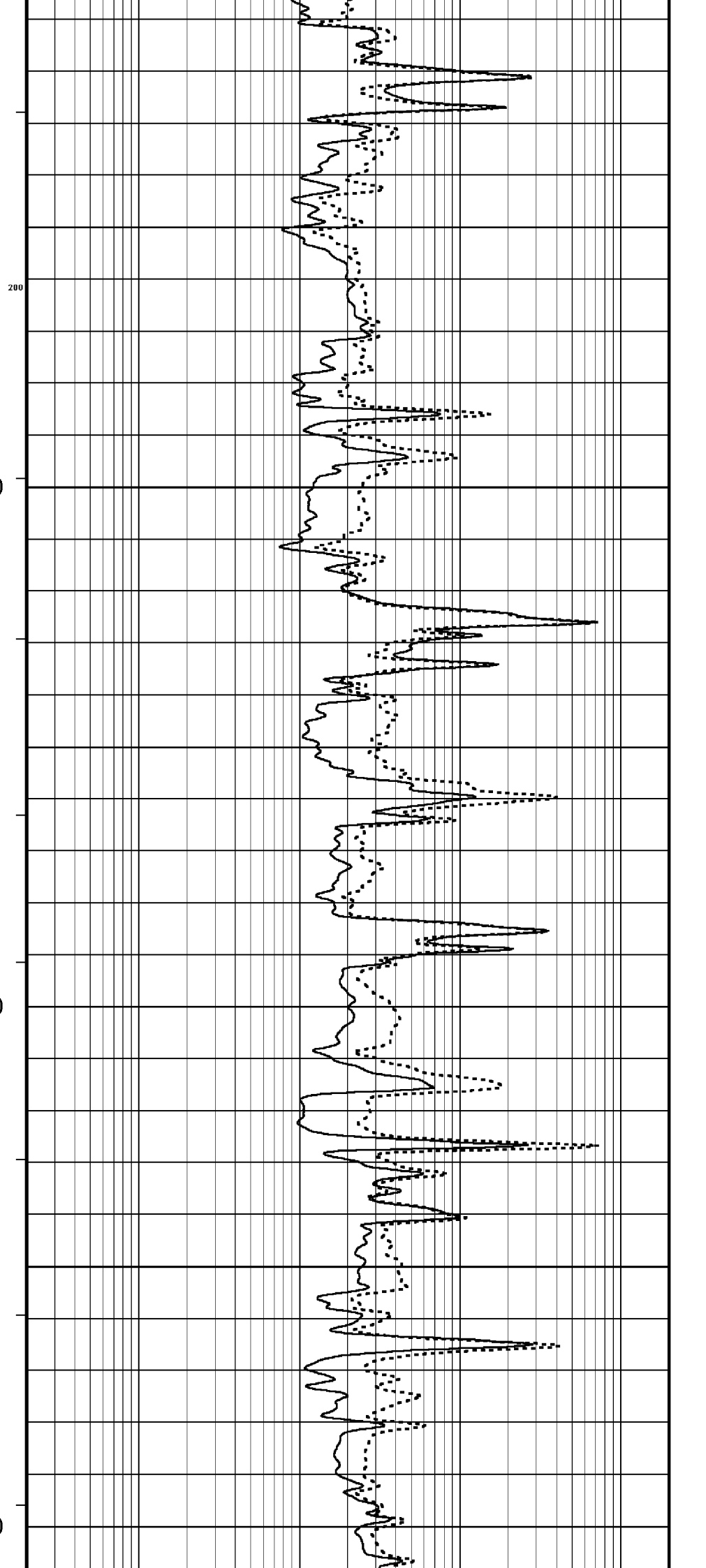
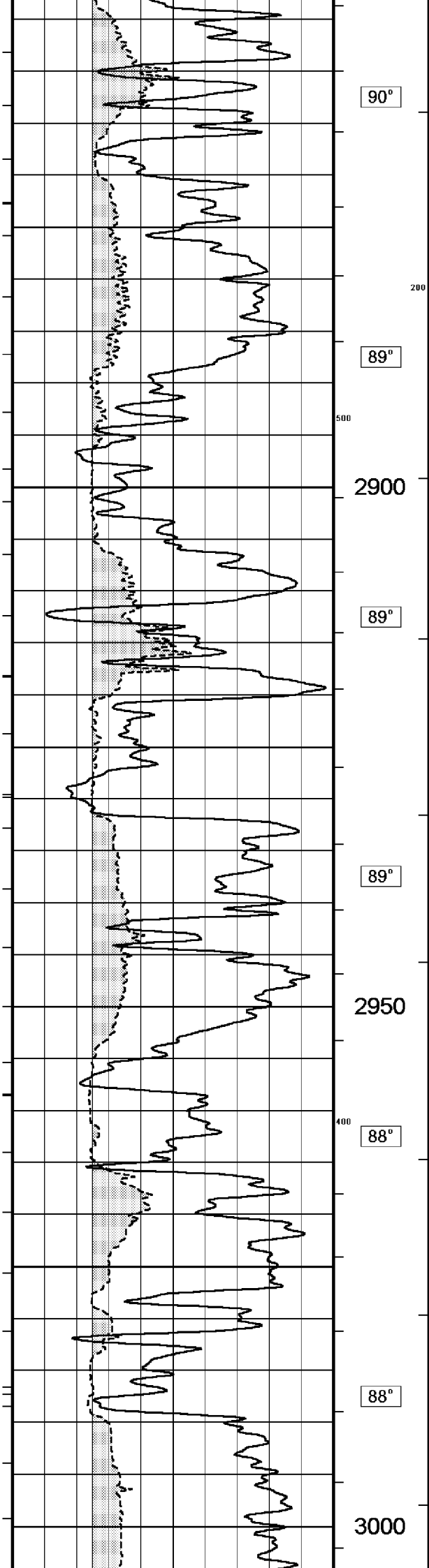




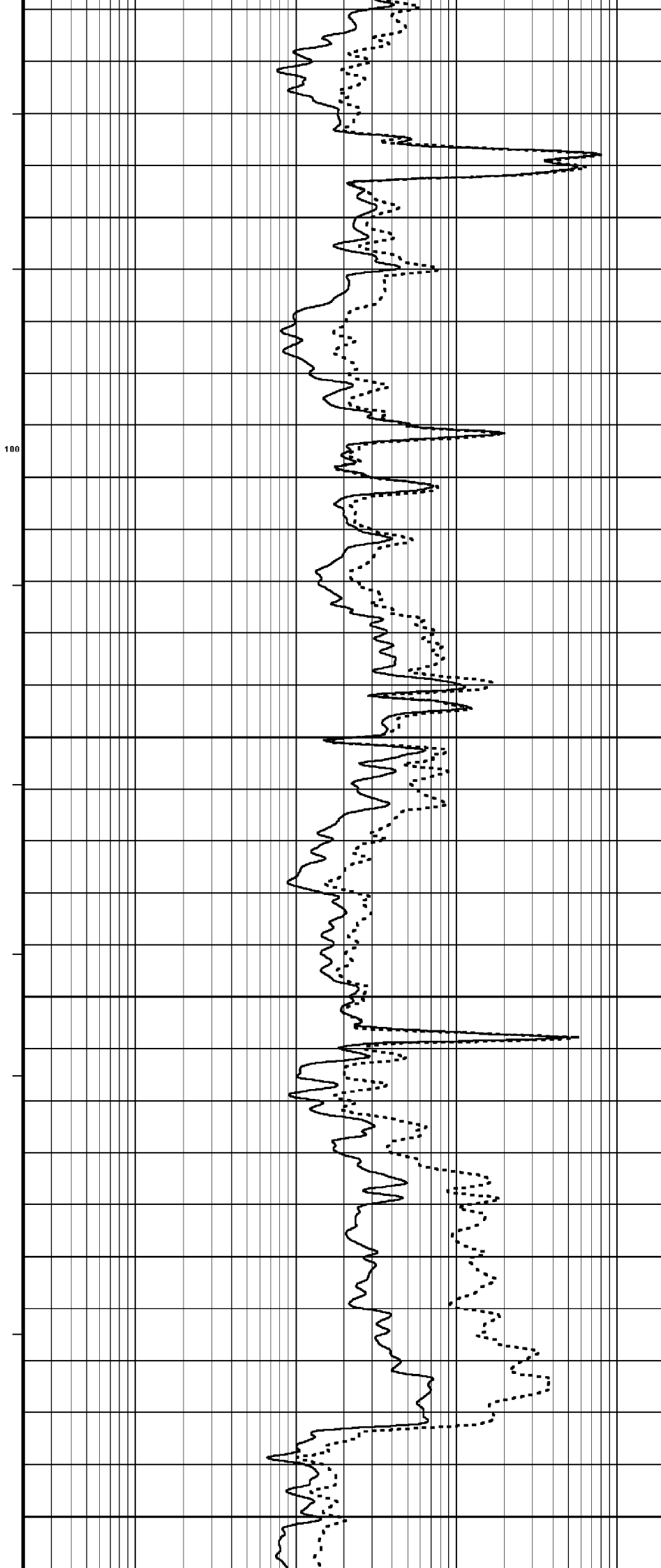
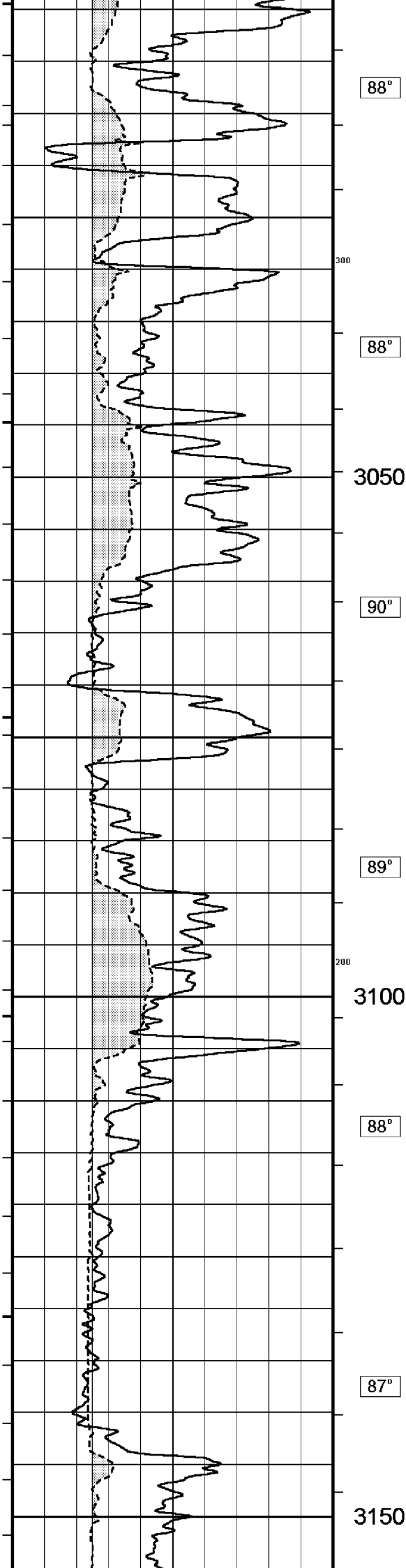


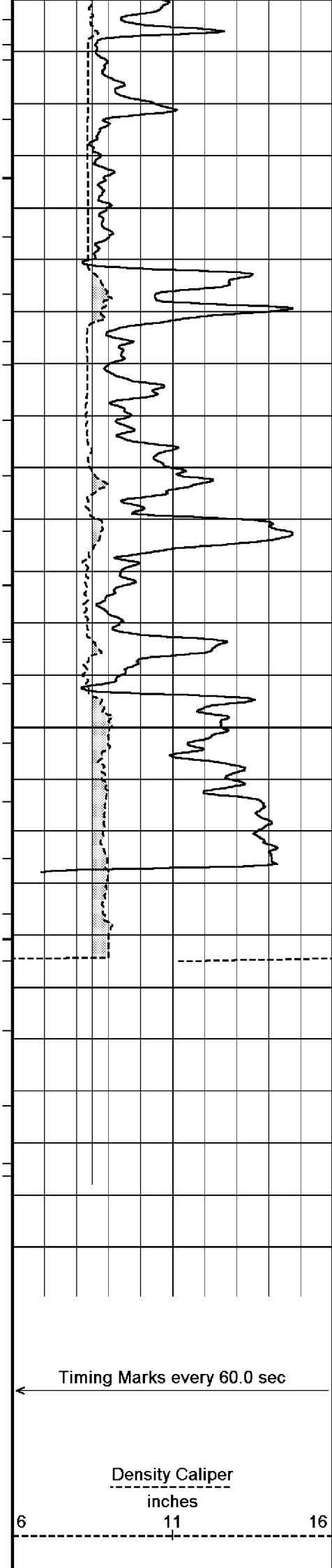




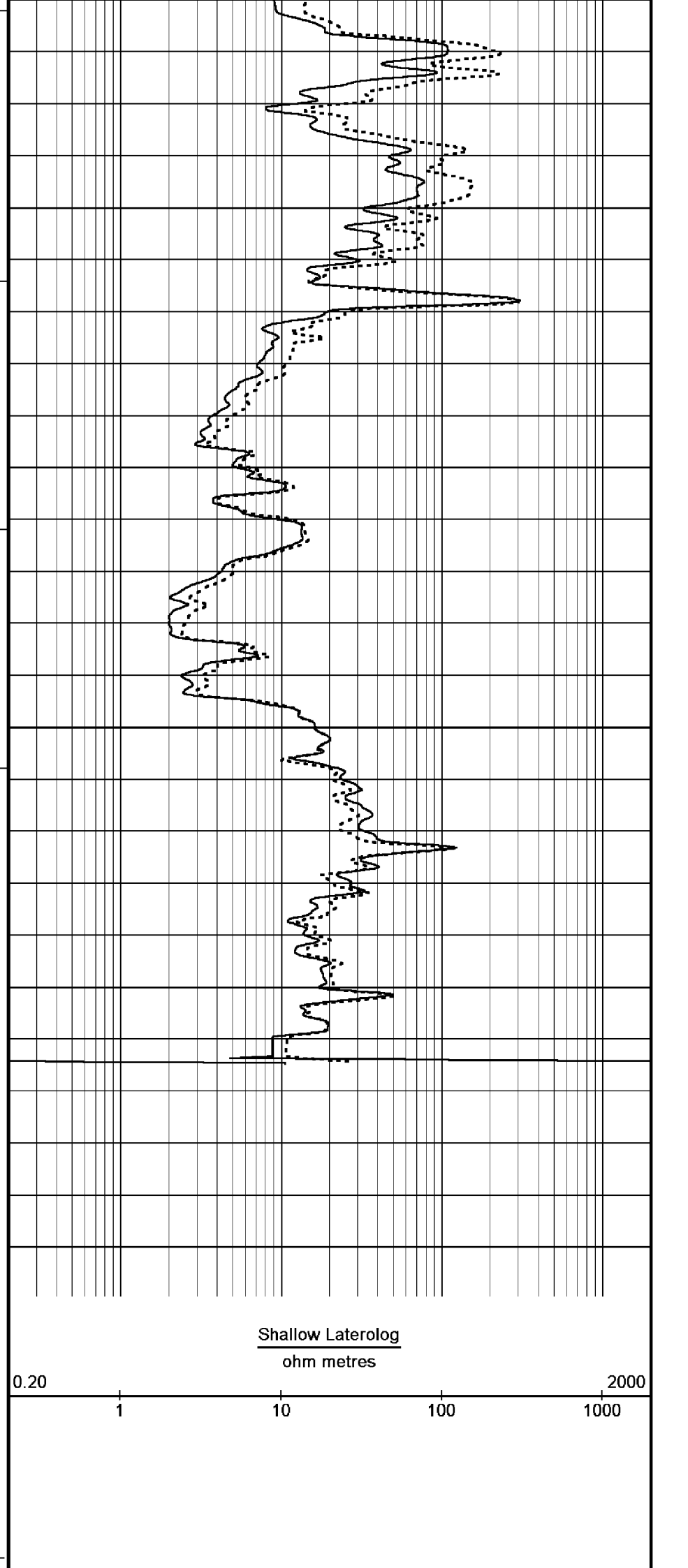




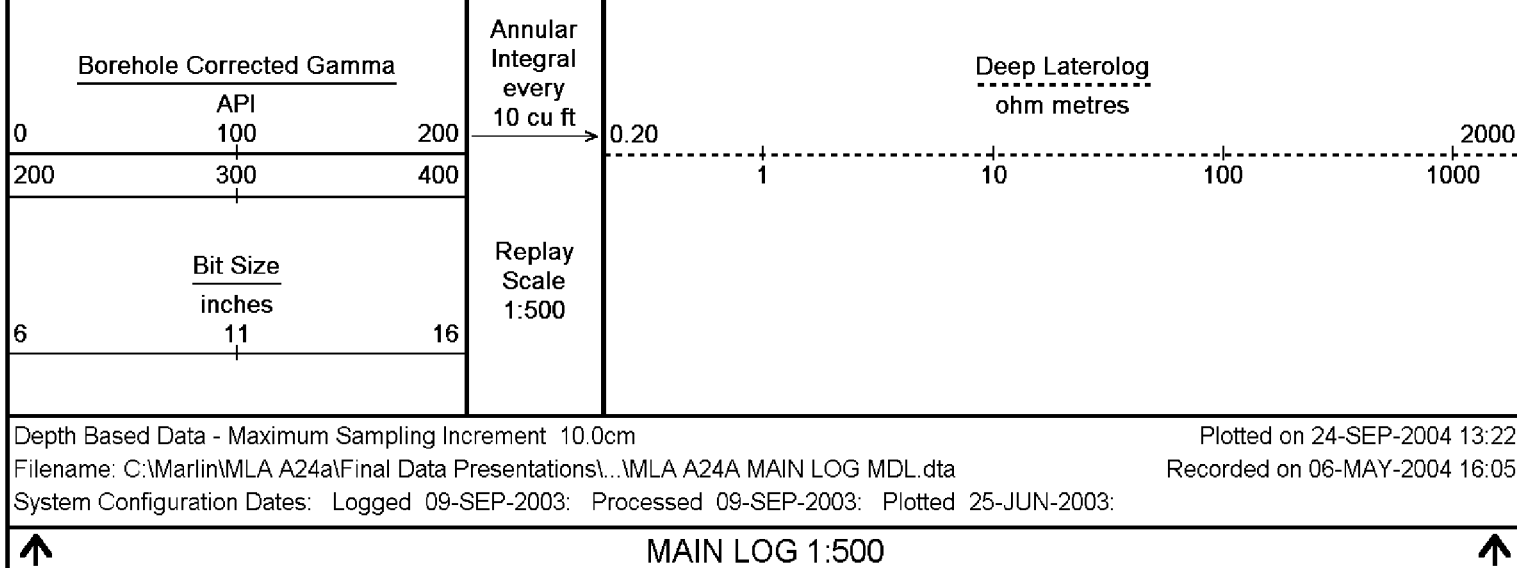




86°  
100  
85°  
3200  
84°  
82°  
3250  
3278  
DSC  
in  
Metres  
Borehole  
Temp in  
deg C  
HVI  
every  
10 cu ft



Shallow Laterolog  
ohm metres



## BEFORE SURVEY CALIBRATION

C:\Marlin\MLA A24a\Final Data Presentations\Black & White Prints\MLA A24A MAIN LOG MDL.dta

General Constants All 000		
General Parameters		
Mud Resistivity	0.119	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	Density Caliper	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Deep Induction	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 098			Field Calibration on 3-MAY-2004 11:25
	Measured	Calibrated (API)	
Background	8	5	
Calibrator (Gross)	1371	914	
Calibrator (Net)	1363	909	

Gamma Constants MCG 098		
Gamma Calibrator Number	60	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Bit Size	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 098			Field Calibration on 3-MAY-2004,11:21
	Measured	Calibrated(Deg C)	
Lower	0.00	0.00	
Upper	100.00	100.00	

High Resolution Temperature Constants MCG 098	
Pre-filter Length	11

Caliper Calibration MPD 083			Base Calibration on 20-APR-2004 12:25
			Field Calibration on 3-MAY-2004 10:29
Base Calibration			
Reading No	Measured	Calibrator Size (in)	
1	13792	4.01	
2	23424	5.99	
3	33363	7.98	
4	43344	9.94	
5	54608	12.01	

## Field Calibration

Measured Caliper (in)  
7.96

Actual Caliper (in)  
7.98

## Laterolog Calibration MLE 017

Base Calibration on 16-APR-2004 15:30  
Field Check on 3-MAY-2004,11:45

## Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.7	969.1	13.2	1321.0
Deep	9.7	969.2	7.5	755.0
Groningen	9.7	970.5	8.5	854.0

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.0	49.0
Deep	28.0	28.0
Groningen	253.1	253.2

## Laterolog Constants MLE 017

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:\Marlin\MLA A24a\Final Data Presentations\Black & White Prints\MLA A24A MAIN LOG MDL.dta

Compact Swivel Head Adaptor

SHA 63 Length: 0.83 m Weight: 26.5 lb

Compact Knuckle Joint

SKJ 49 Length: 0.66 m Weight: 24.3 lb

Compact Battery Sub.

MBS 99 Length: 4.34 m Weight: 88.2 lb

Compact Inline Standoff B

MIS 141 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 127 Length: 0.65 m Weight: 15.4 lb

Compact Stiff Bridle Electrode Sub.

MBE 19 Length: 3.76 m Weight: 94.8 lb



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

Thrid Bridle MBE 20  
MLK 111 Length: 3.76 m Weight: 94.8 lb

Compact Gamma  
MCG 98 Length: 2.65 m Weight: 63.9 lb

Compact Memory Sub.  
MMS 24 Length: 0.95 m Weight: 22.0 lb

Compact Knuckle Joint  
SKJ 48 Length: 0.66 m Weight: 24.3 lb

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

Compact Inline Bowspring A  
MIS 95 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

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

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

Compact Knuckle Joint  
SKJ 44 Length: 0.66 m Weight: 24.3 lb

Compact Inline Standoff B  
MIS 128 Length: 0.65 m Weight: 15.4 lb

Compact Upper Guard Sub.  
MUG 5 Length: 2.74 m Weight: 68.3 lb



32.22 m  
31.33 m

GGCE - Borehole Corrected Gamma  
CGXT - MCG External Temperature

23.48 m  
23.48 m  
23.48 m

AVOL - Annular Volume  
HVOL - Hole Volume  
CLDC - Density Caliper

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

Compact Laterolog Electrode Sub.  
MLE 17 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 31 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 140 Length: 0.65 m Weight: 15.4 lb

Compact Sonic  
MSS 47 Length: 3.82 m Weight: 72.8 lb

Compact Inline Standoff B  
MIS 73 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 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 53.18 m Weight: 1294.1 lb

Tool Zero (0.32m from bottom)

All measurements relative to tool zero.

COMPANY

ESSO AUSTRALIA PTY. LTD.

WELL

MARLIN A24A

FIELD

TURRUM

PROVINCE/COUNTY

BASS STRAIT

COUNTRY/STATE

AUSTRALIA

COUNTRY/STATE		AUSTRALIA			
Elevation Kelly Bushing		metres	First Reading	3270.12	metres
Elevation Drill Floor	27.91	metres	Depth Driller	3275.00	metres
Elevation Ground Level	-59.00	metres	Depth Logger	3270.50	metres
<div> <div> <b>Reeves</b>  <b>Compact</b> </div> <div> Dual Laterolog  Gamma Ray  1:500 MD </div> </div>					