Reeves

DUAL LATEROLOG
GAMMA RAY
1:200 TVD

COMPANY	ESSO AUSTRALIA PTY. LTD.
WELL	FLOUNDER A12a
FIELD	GIPPSLAND BASIN
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA
LOCATION	5758709.11 m N, 625849.47 m E
	38°18'39.173" S, 148°26'21.833" E

LSD	SEC	TWP	RGE	Other Services
				PHOTO DENSITY COMPENSATED SONIC
				COMPENSATED NEUTRON

API Number
Permit Number

Permanent Datum MSL , Elevation 0 metres
Log Measured From RT@33.85 metres above Permanent Datum
Drilling Measured From RT

Elevations:

KB		metres
DF	33.85	metres
GL	-93.00	metres

Date	12-APR-2003			
Run Number	1			
Depth Driller	2636.40	metres		
Depth Logger	2637.40	metres		
First Reading	2636.90	metres		
Last Reading	1084.00	metres		
Casing Driller	754.70	metres		
Casing Logger	754.50	metres		
Bit Size	8.50	inches		
Hole Fluid Type	KCl/PHPA/GLY			
Density / Viscosity	9.90 lb/USg	68.00 sec/qt		
PH / Fluid Loss	9.40	2.50 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.124 @ 25.0	ohm-m		
Rmf @ Measured Temp	0.113 @ 25.0	ohm-m		
Rmc @ Measured Temp	0.179 @ 25.0	ohm-m		
Source Rmf / Rmc	PRESS	PRESS		
Rm @ BHT	0.048 @100.0	ohm-m		
Time Since Circulation	17:45 HRS			
Max Recorded Temp	100.00	deg C		
Equipment Name	COMPACT			
Equipment / Base	1			
Recorded By	M.Barnes, R.Tench		G.McManus	
Witnessed By	E.Espiritu			
Circ.Stopped	08:00 11-APR			

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	0.00	2920.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	10.750	0.00	856.25	40.50

REMARKS

DRILLING RIG: NABORS (ISDL) 453.

TOP OF WINDOW: 856.25m
TOP OF WHIPSTOCK: 856.75m
BTTM OF WINDOW: 863.25m

REEVES COMPACT WIRELINE TOOLS RUN ON SCHLUMBERGER UNIT.

MPD CALIPER AND MMR CALIPER ARE INDEPENDENT OF EACH OTHER, DUE TO SWIVALS ABOVE AND BELOW DENSITY/NEUTRON SECTION.

SPIKES IN DEEP LATEROLOG @ 2094m MD AND 2113m MD ARE INVALID.

HTHP: 11.2 ml/30 min @ Deg 121 deg C.

MAX DEVIATION: 53.8 DEGREES AT 2137.0 m.
DOGLEG AT 892 M, WITH DLS > 6.0 DEGREES/30 m.

REEVES CREW: M.BARNES, R.TENCH, G.MCMANUS.
SCHLUMBERGER CREW: B.GLOVER, B.TAYLOR, J.LIGHT, R.DEGROOT.

AFTER SURVEY CALIBRATION

C:\Fla a12a\Dpk\MAIN LOG A DSC.dta

Gamma Check MCG 076

Field Calibration on 7-APR-2003,14:34
After Survey Check on 12-APR-2003,07:31

	Before (API)	After (API)
Background	10	6
Calibrator (Gross)	919	915
Calibrator (Net)	909	909

Laterolog Check MLE 015

Before Survey Check on 12-APR-2003,01:32
After Survey Check on 12-APR-2003,06:46

Channel	Before Survey (ohm-m)	After Survey (ohm-m)
Shallow	49.1	49.1
Deep	31.5	31.5
Groningen	246.3	246.3

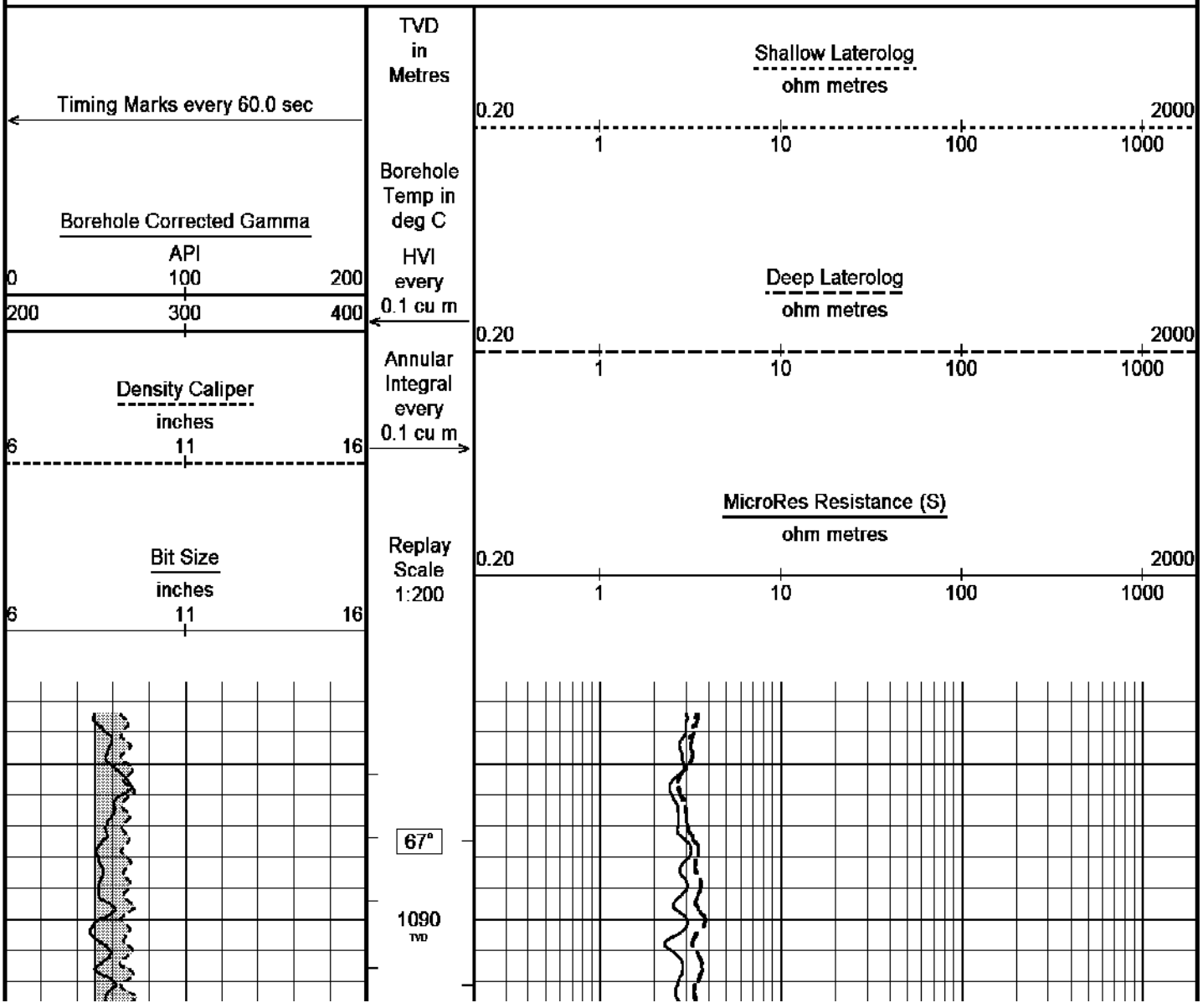
Micro Laterolog Check MMR 005

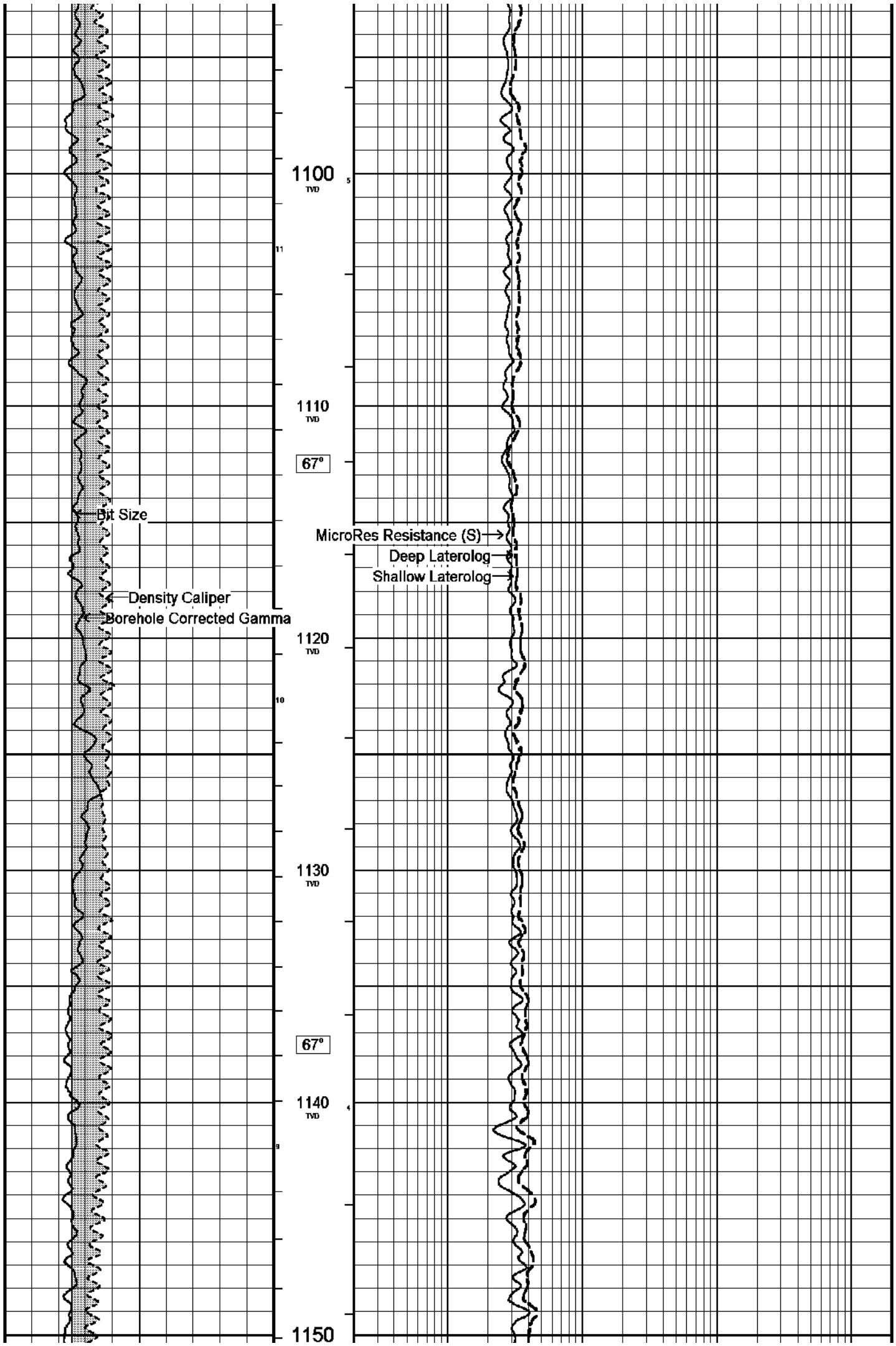
Before Survey Check on 12-APR-2003,01:31
After Survey Check on 12-APR-2003,06:47

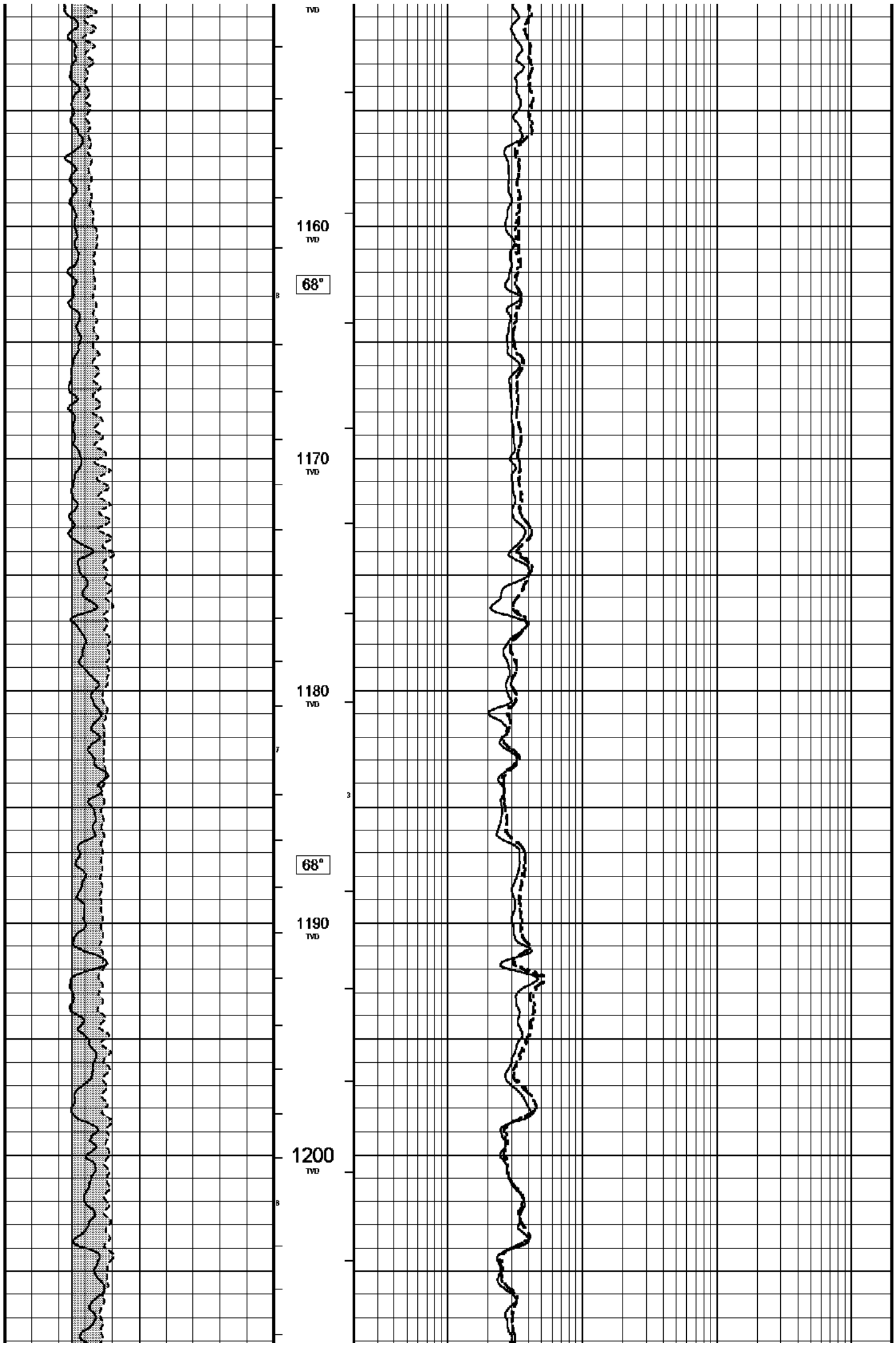
Before Survey (ohm-m)	After Survey (ohm-m)
8.0	8.0

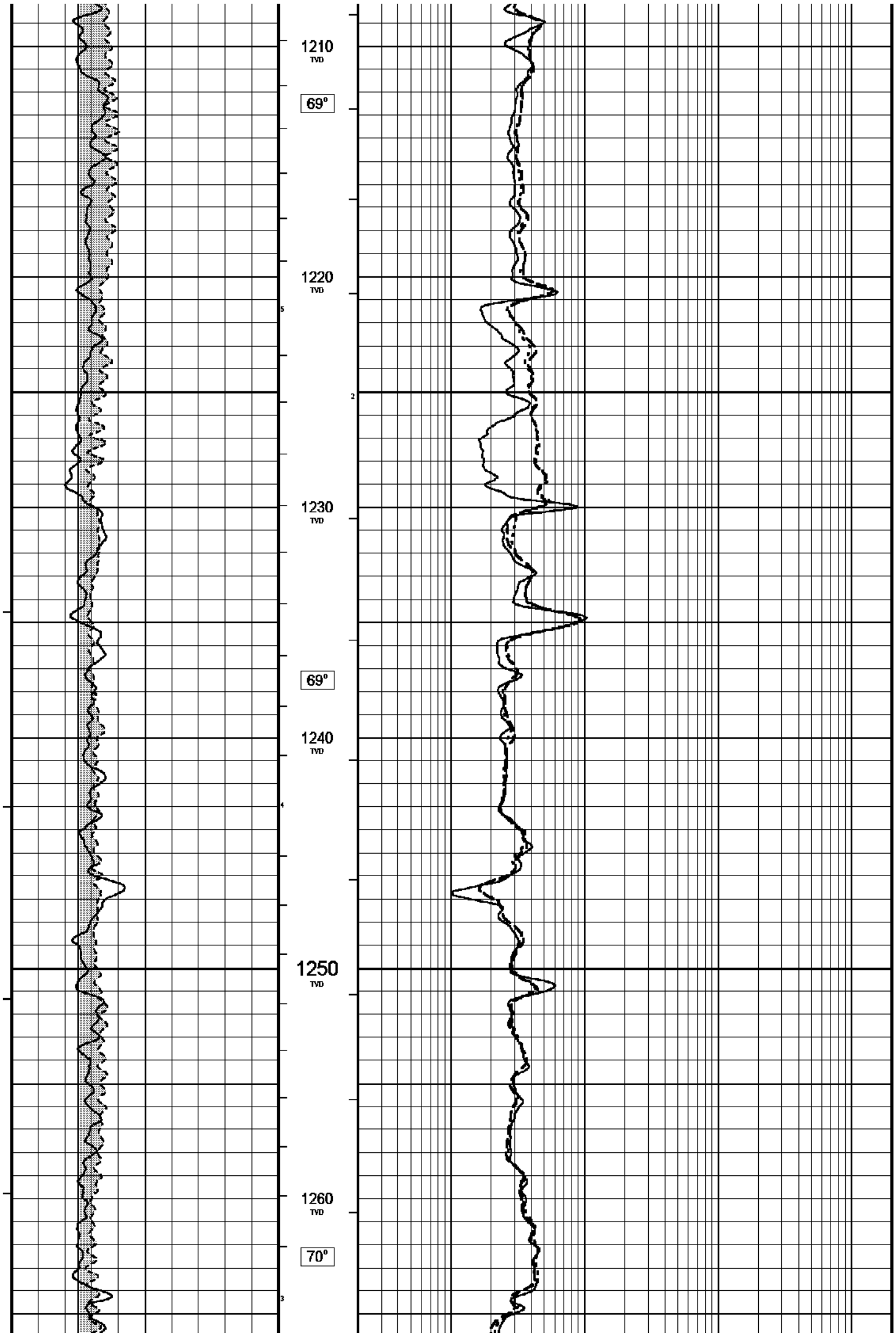
MAIN LOG B 1:200

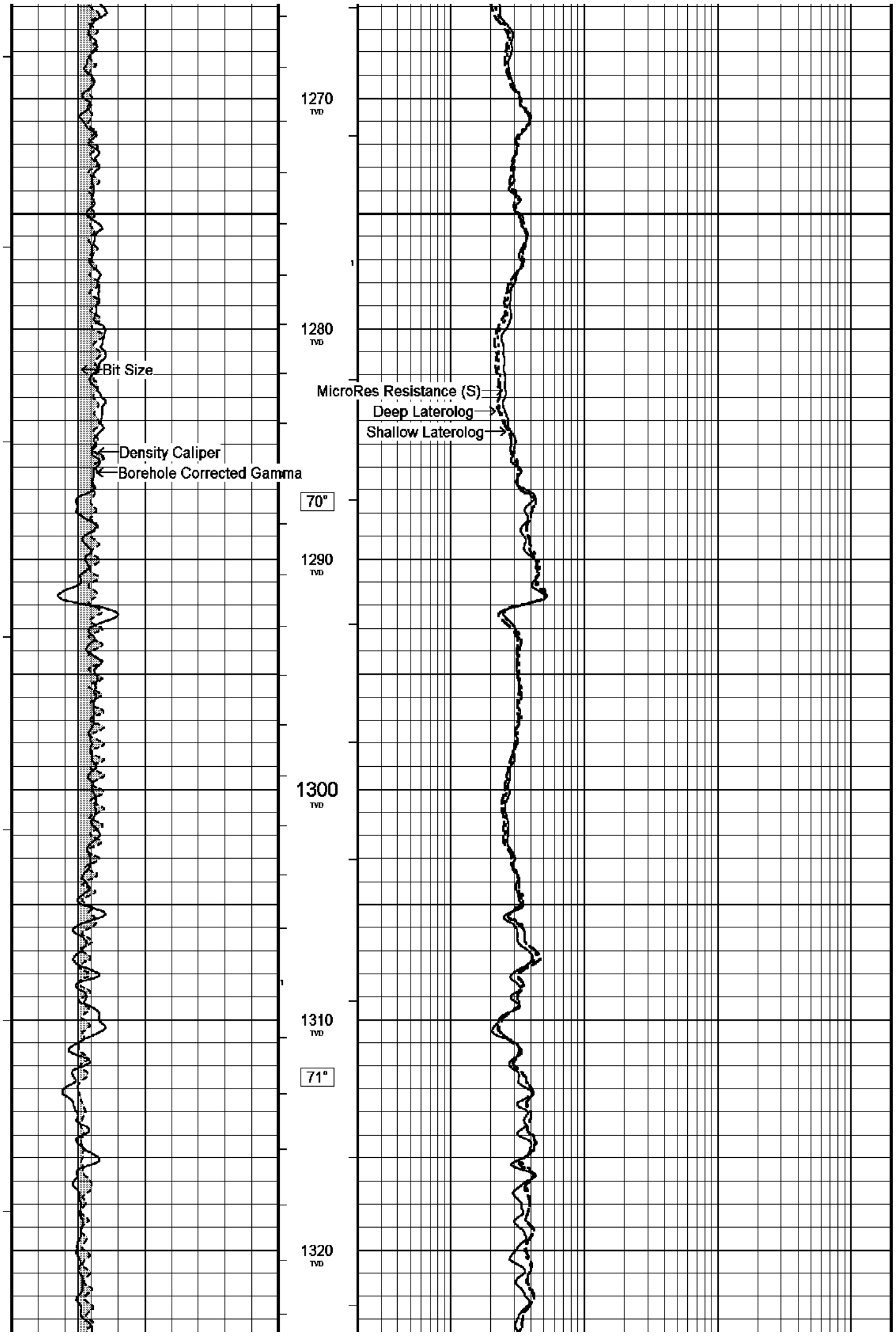
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 26-MAY-2003 10:05
Filename: C:\Fla a12a\Dpk\MAIN LOG B DSC.dta
Recorded on 12-APR-2003 04:49
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

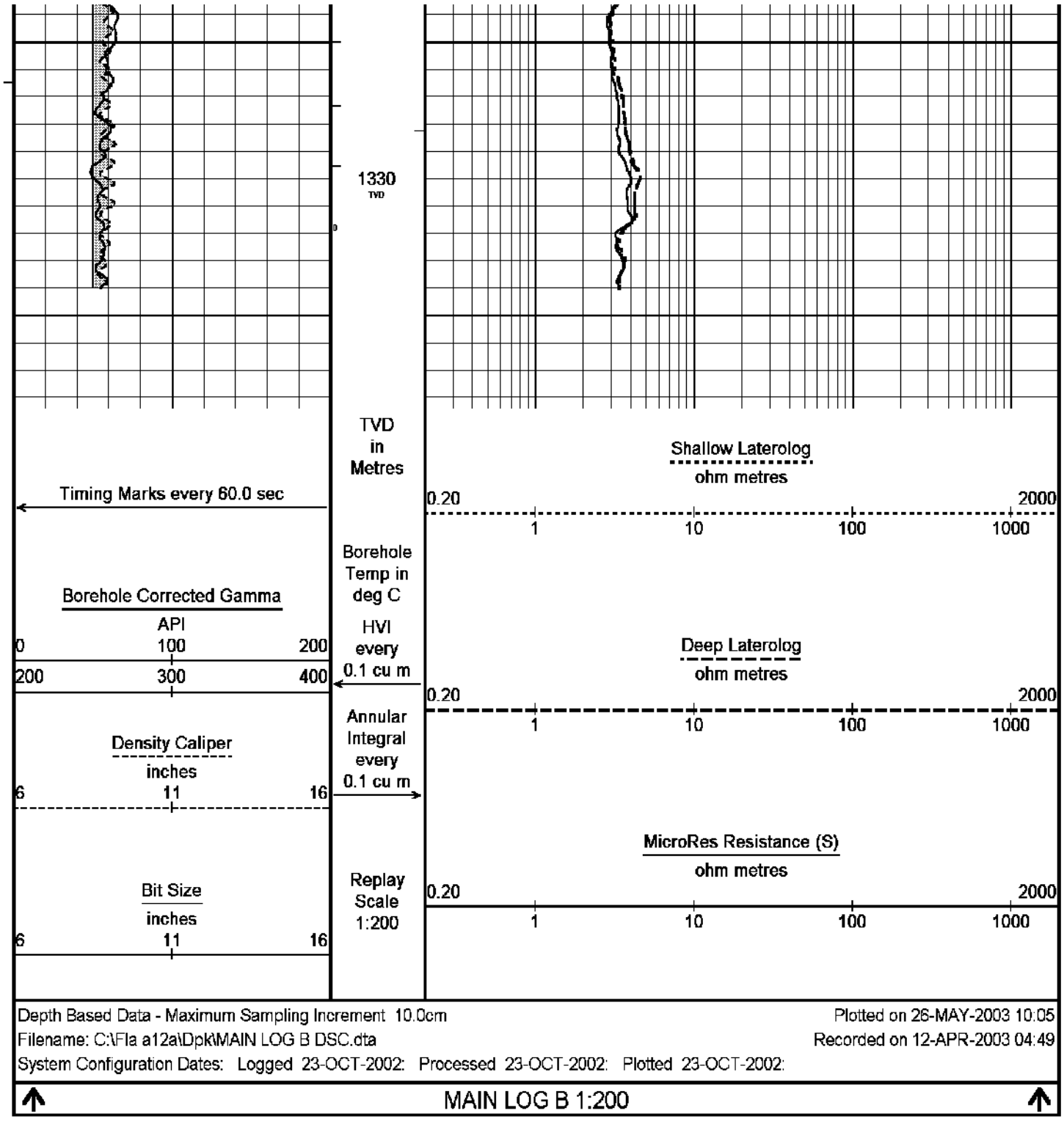



1100
TVD
1110
TVD
67°
Bit Size
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
Density Caliper
Borehole Corrected Gamma
1120
TVD
1130
TVD
67°
1140
TVD
1150


TVD
1160
TVD
68°
1170
TVD
1180
TVD
68°
1190
TVD
1200
TVD


1210
TVD
69°
1220
TVD
1230
TVD
69°
1240
TVD
1250
TVD
1260
TVD
70°


1270
TVD
1280
TVD
Bit Size
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
Density Caliper
Borehole Corrected Gamma
70°
1290
TVD
1300
TVD
1310
TVD
71°
1320
TVD

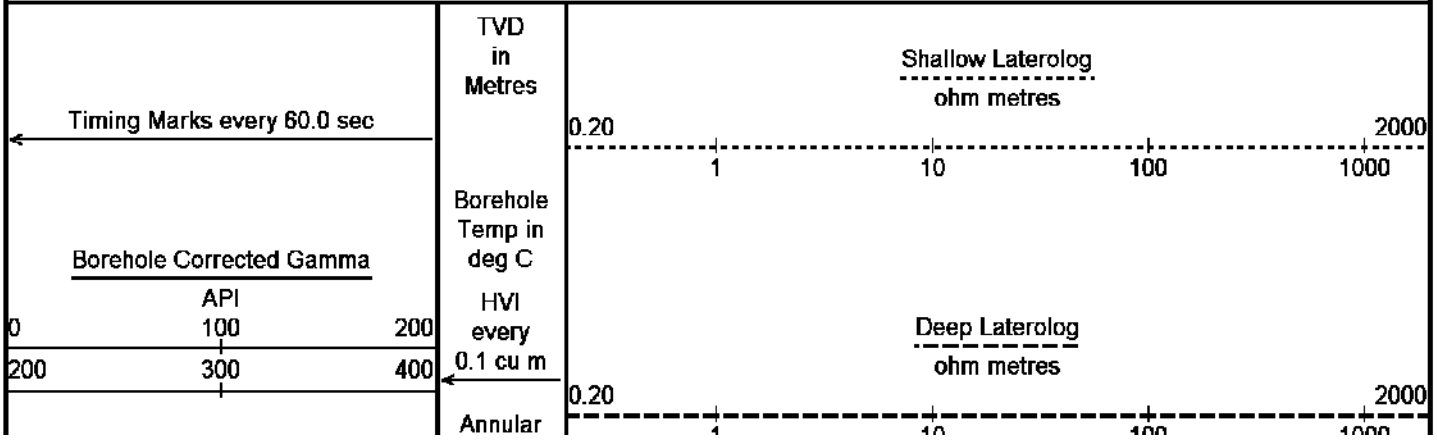


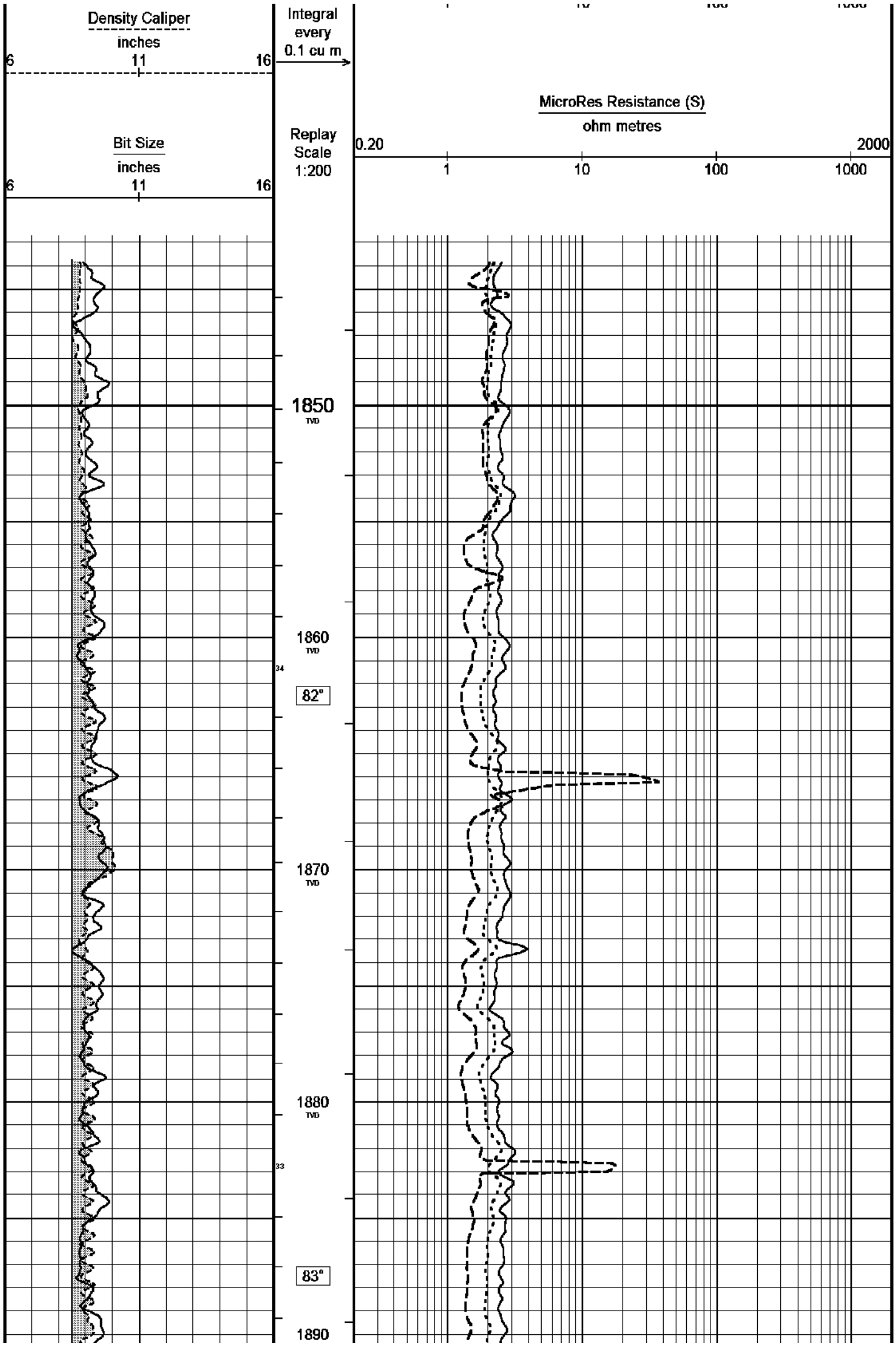
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 26-MAY-2003 10:05
Filename: C:\Fla a12a\Dpk\MAIN LOG B DSC.dta — Recorded on 12-APR-2003 04:49
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

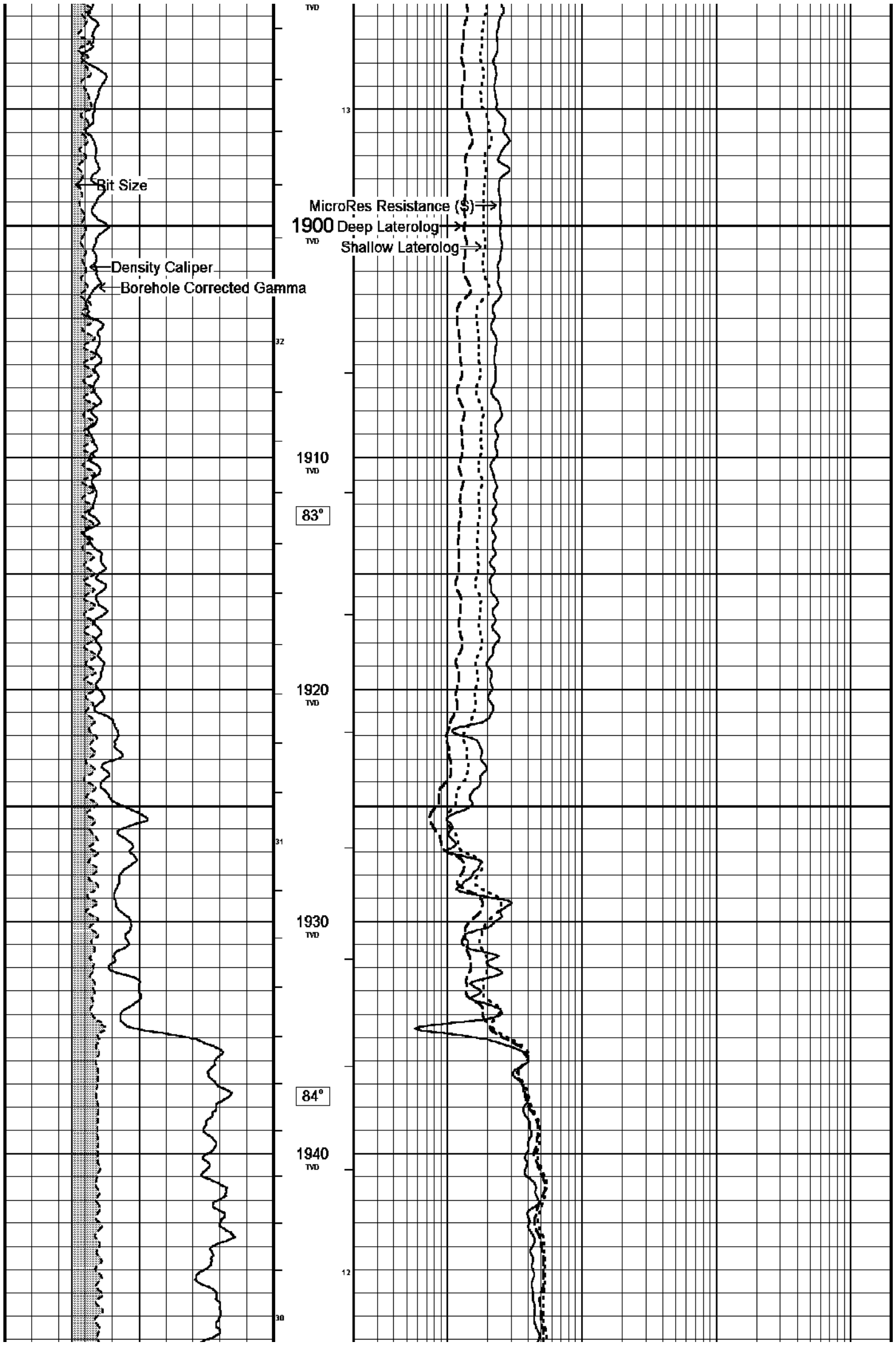
MAIN LOG B 1:200

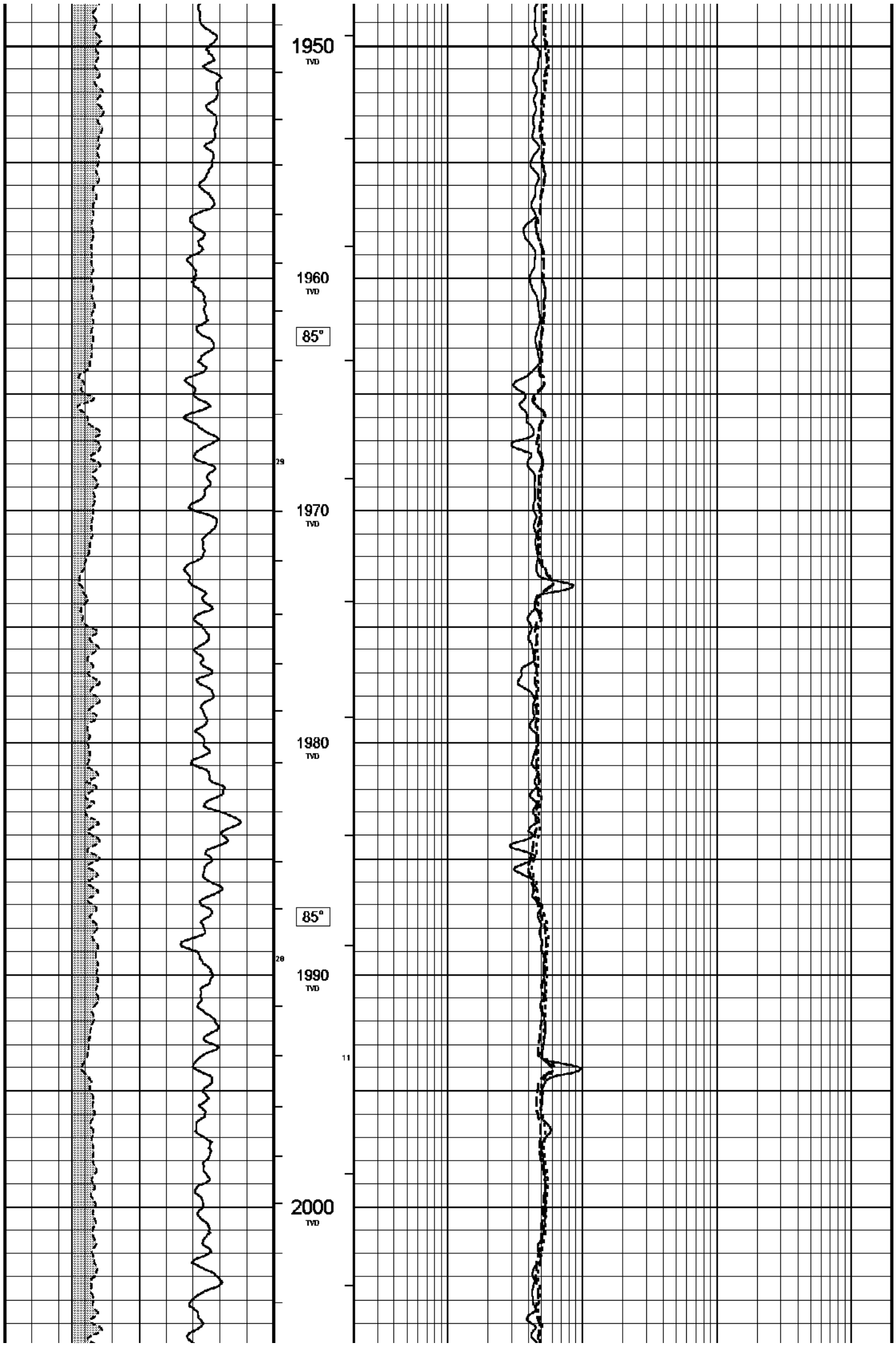
MAIN LOG A 1:200

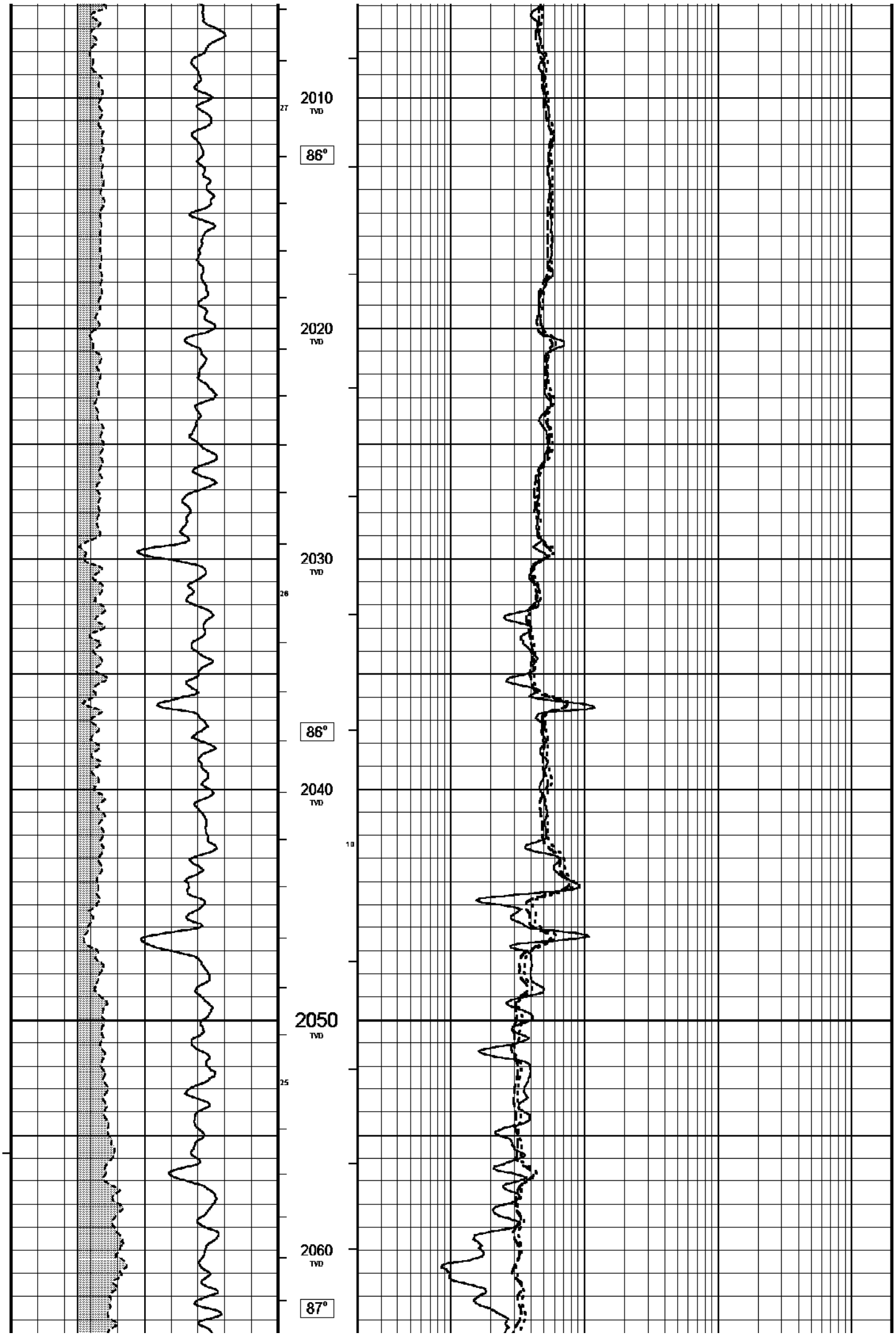
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 26-MAY-2003 10:05
Filename: C:\Fla a12a\Dpk\MAIN LOG A DSC.dta — Recorded on 12-APR-2003 01:43
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

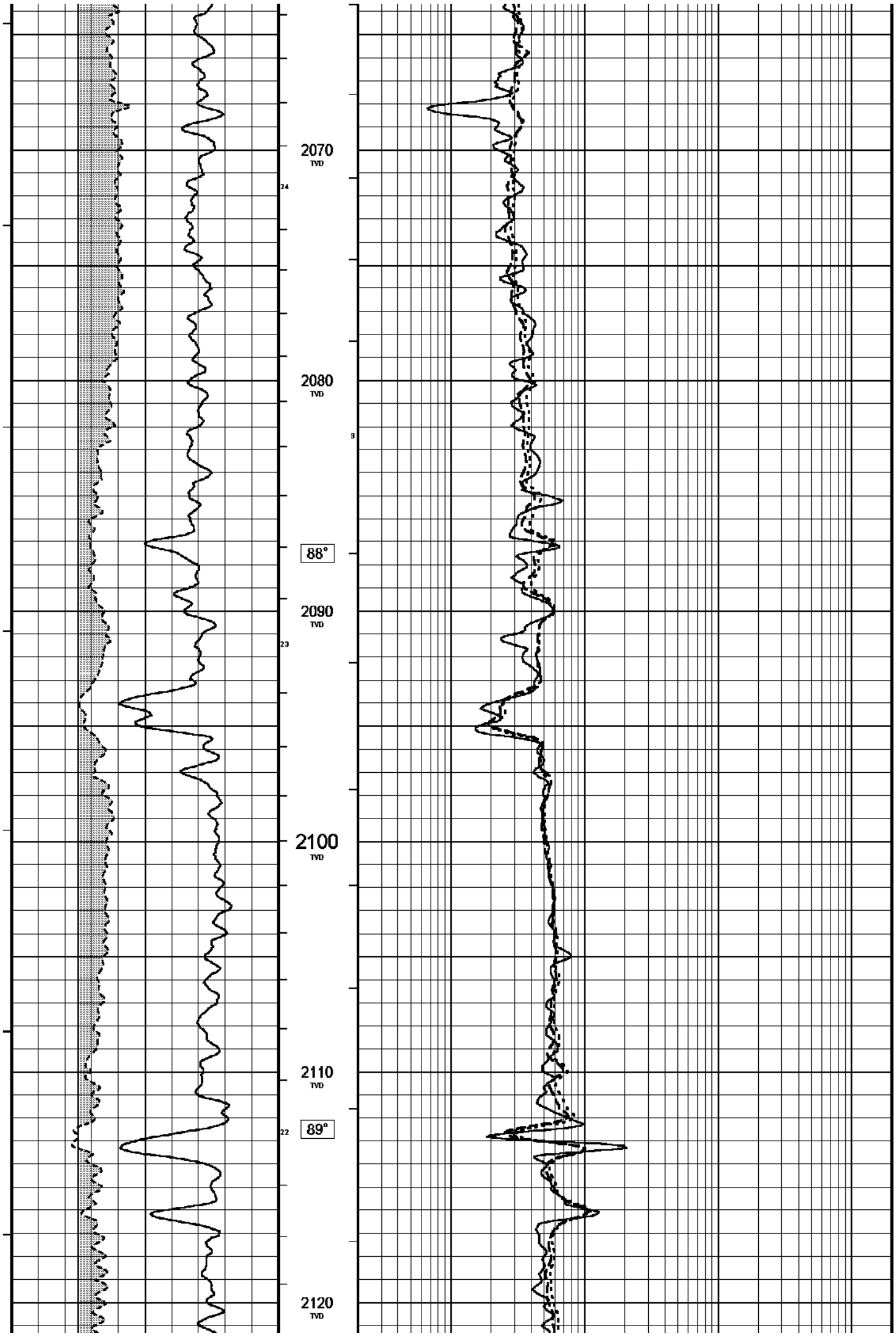


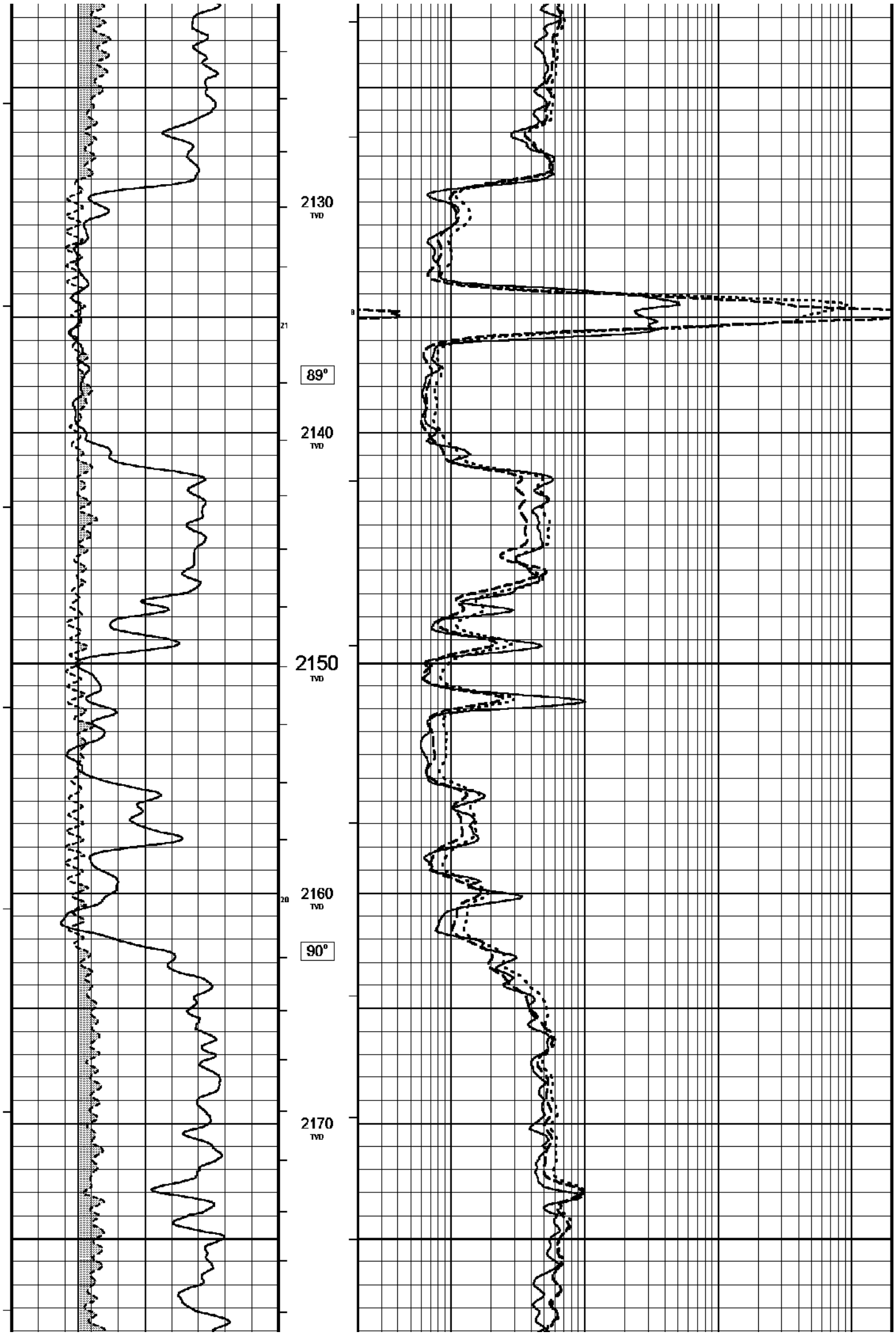

Density Caliper
inches
6
11
16
Bit Size
inches
6
11
16
Integral
every
0.1 cu m
Replay
Scale
1:200
MicroRes Resistance (S)
ohm metres
0.20
1
10
100
1000
2000
1850
TVD
1860
TVD
82°
1870
TVD
1880
TVD
83°
1890

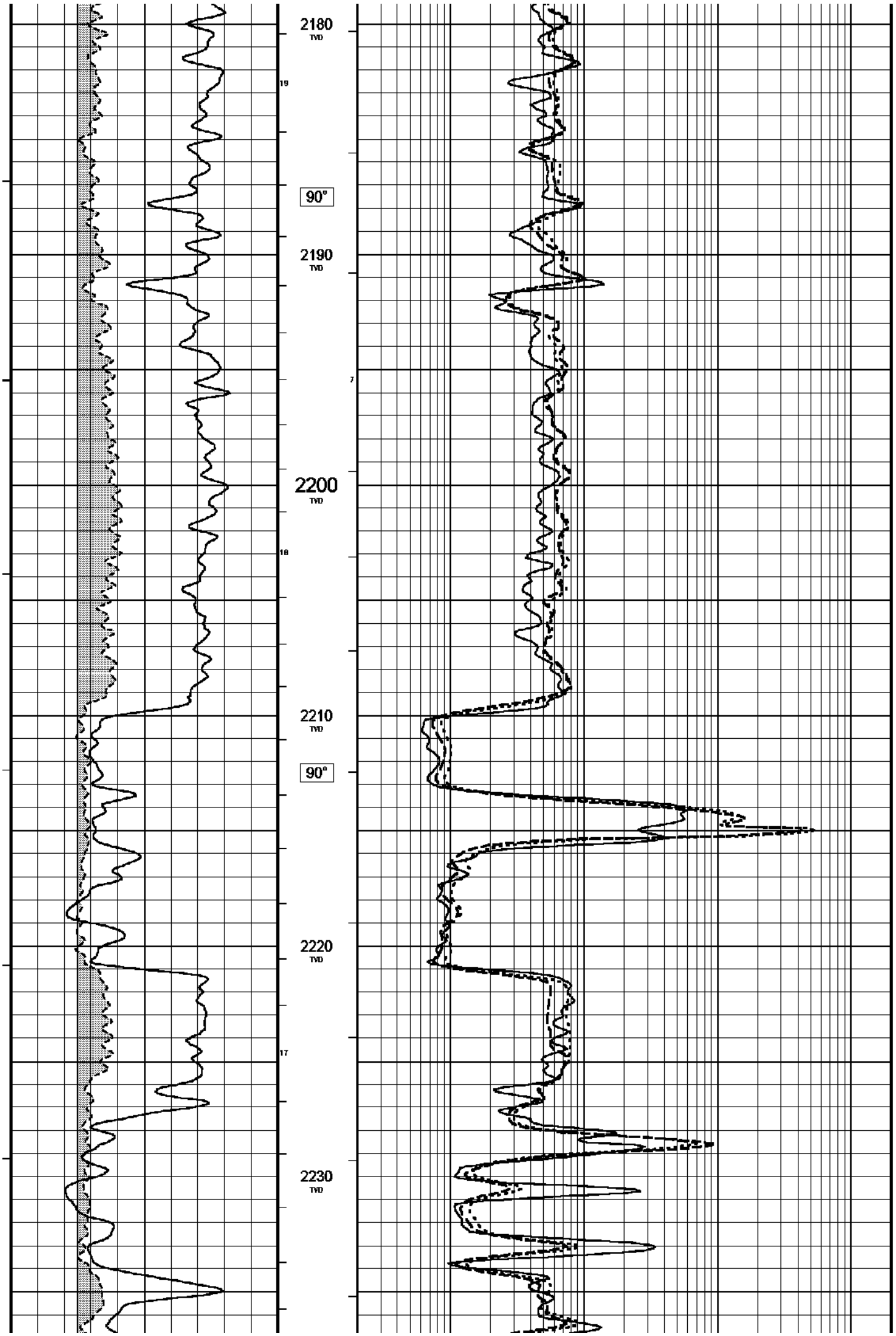

TVD
13
Bit Size
MicroRes Resistance (ϕ)
1900 TVD
Deep Laterolog
Shallow Laterolog
Density Caliper
Borehole Corrected Gamma
32
1910 TVD
83°
1920 TVD
31
1930 TVD
84°
1940 TVD
12
30

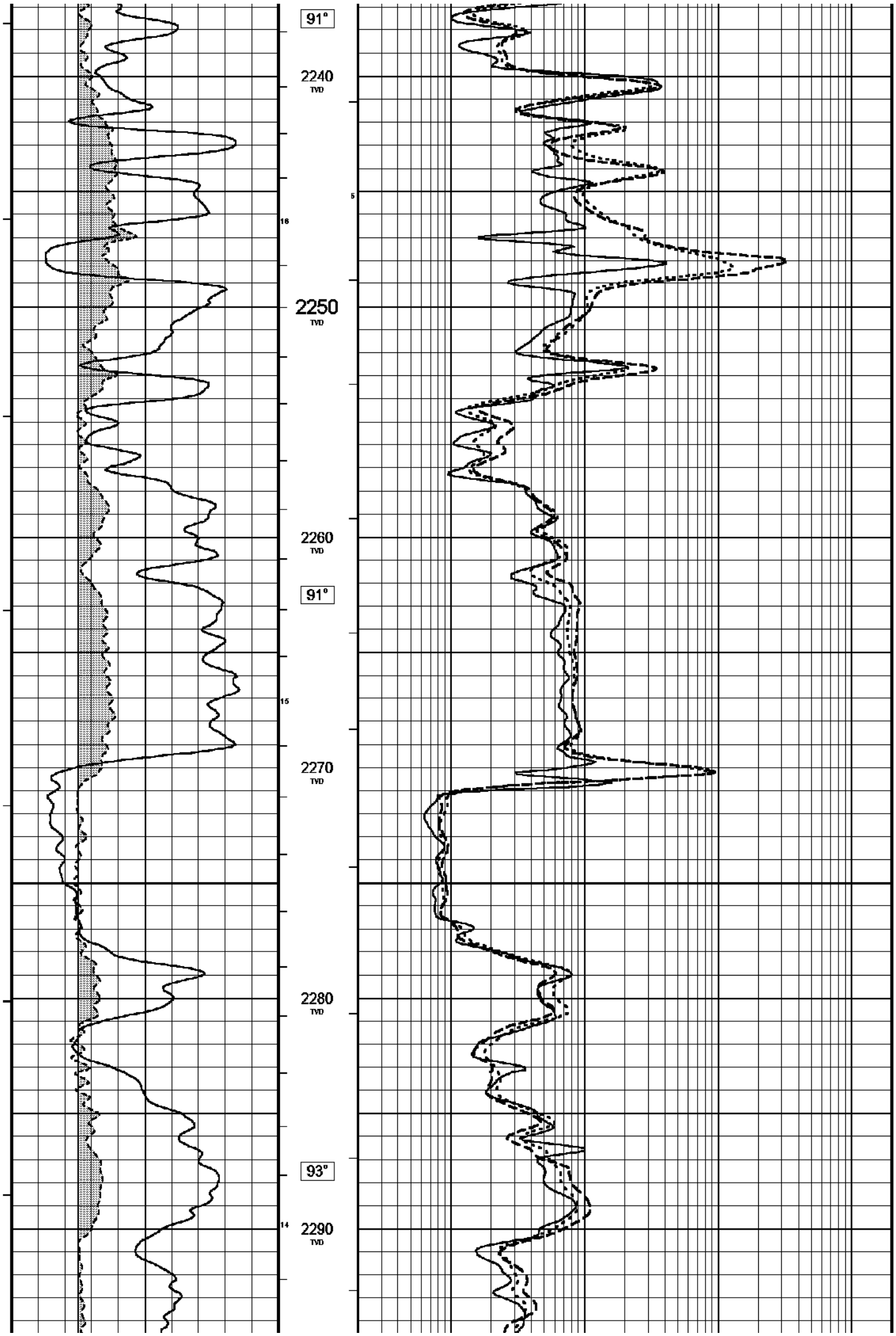

1950
TVD
1960
TVD
85°
1970
TVD
1980
TVD
85°
1990
TVD
2000
TVD

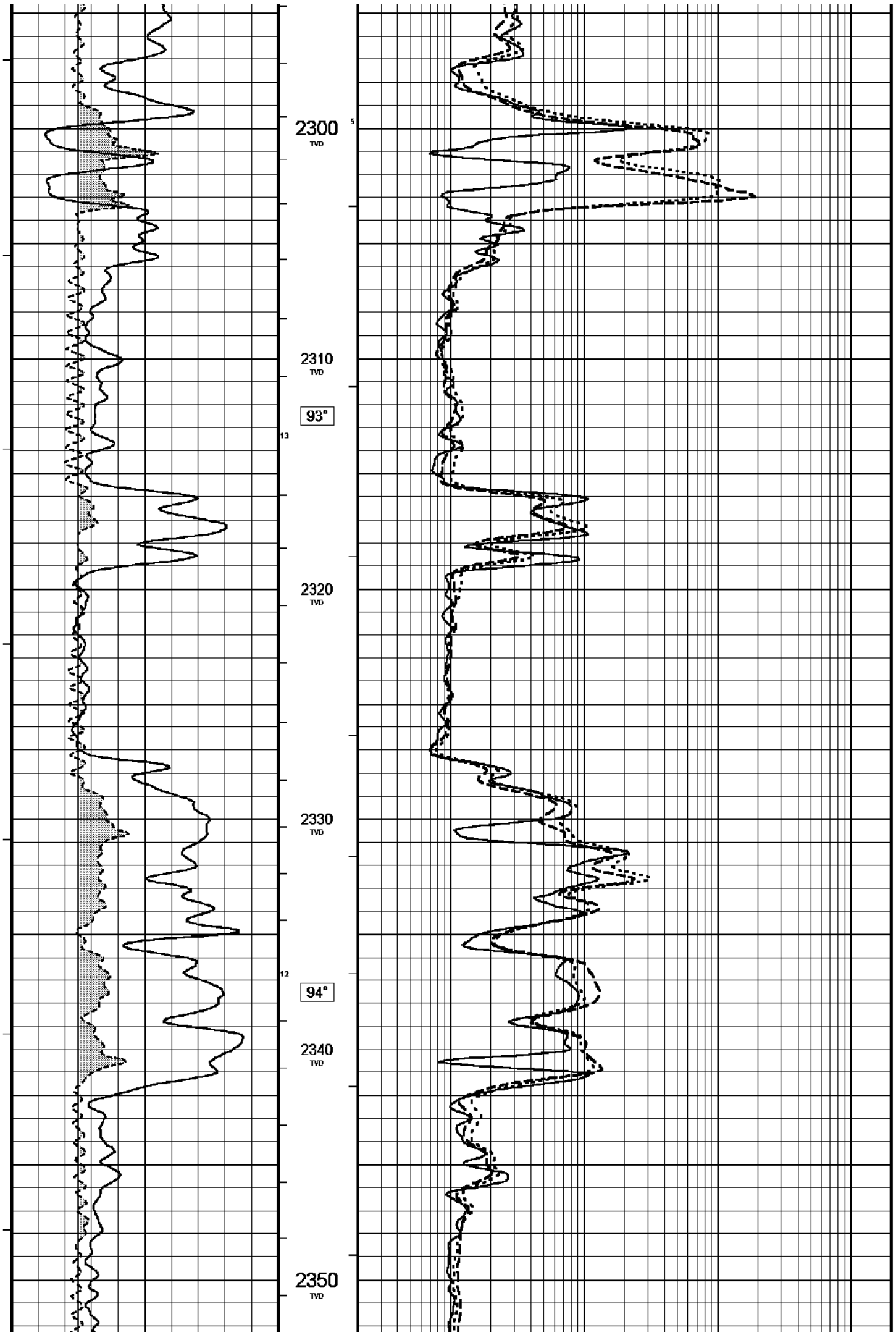

2010
TVD
86°
2020
TVD
2030
TVD
86°
2040
TVD
2050
TVD
2060
TVD
87°

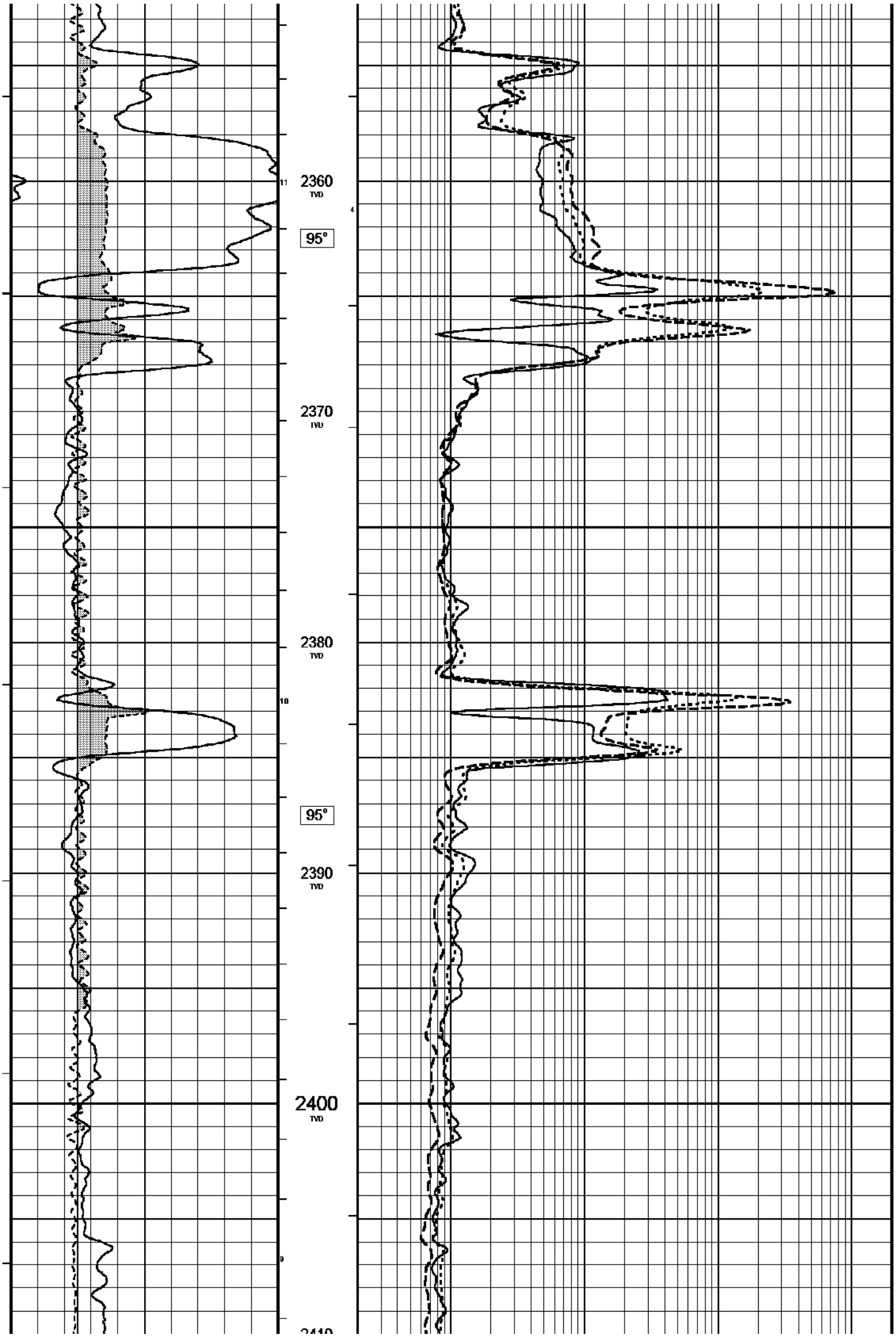

2070
TVD
2080
TVD
88°
2090
TVD
2100
TVD
2110
TVD
89°
2120
TVD

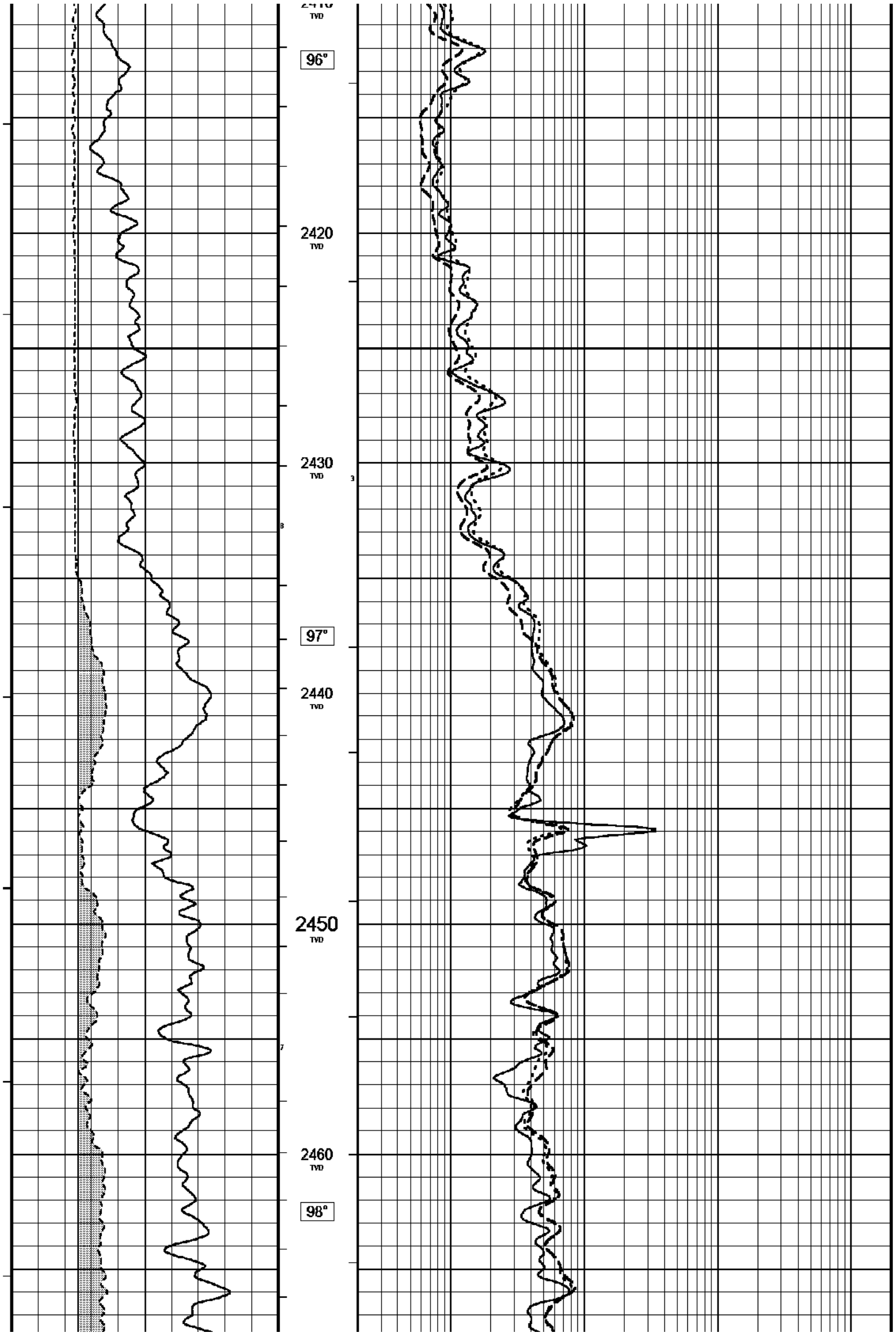

2130
TVD
89°
2140
TVD
2150
TVD
2160
TVD
90°
2170
TVD

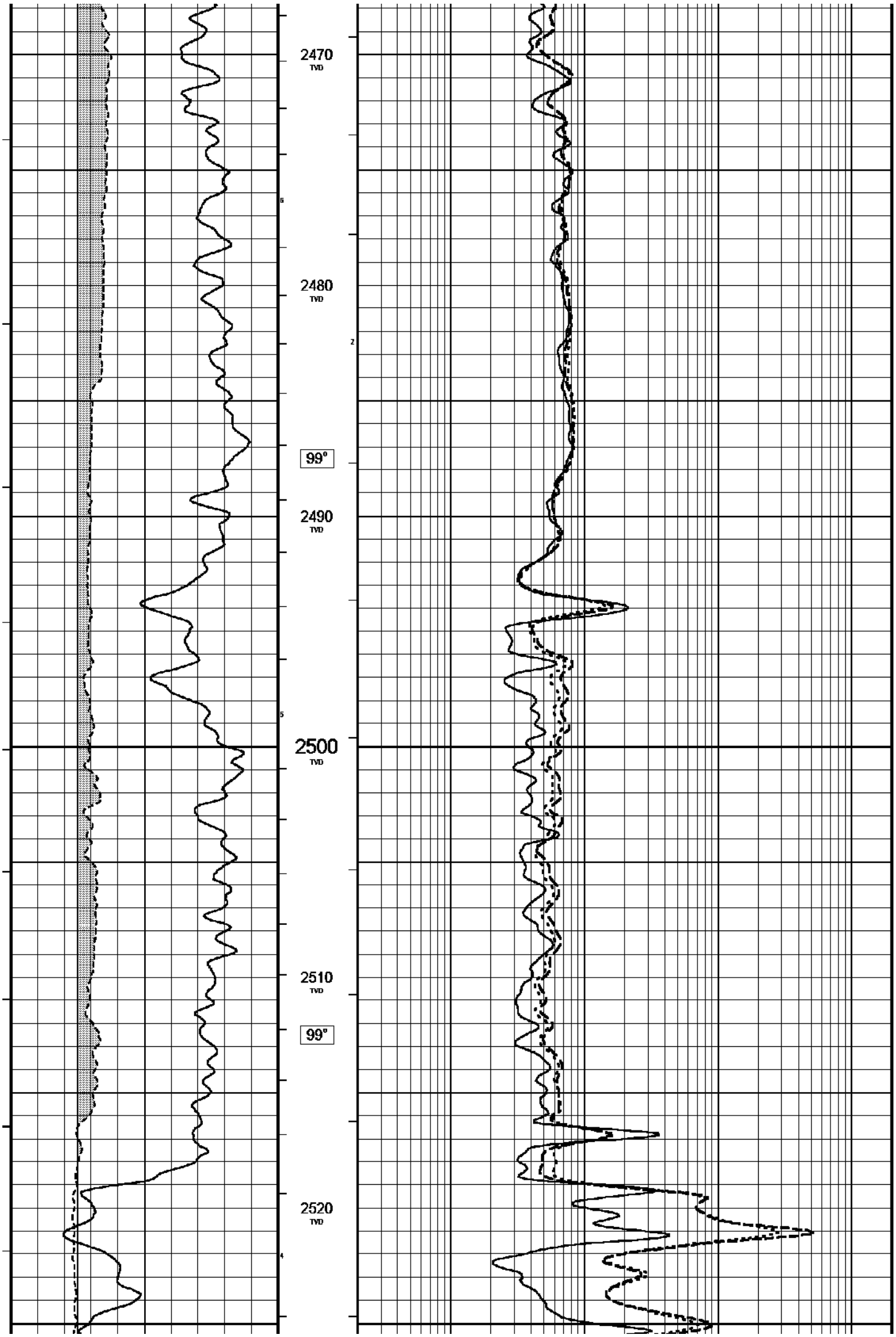

2180
TVD
90°
2190
TVD
2200
TVD
2210
TVD
90°
2220
TVD
2230
TVD

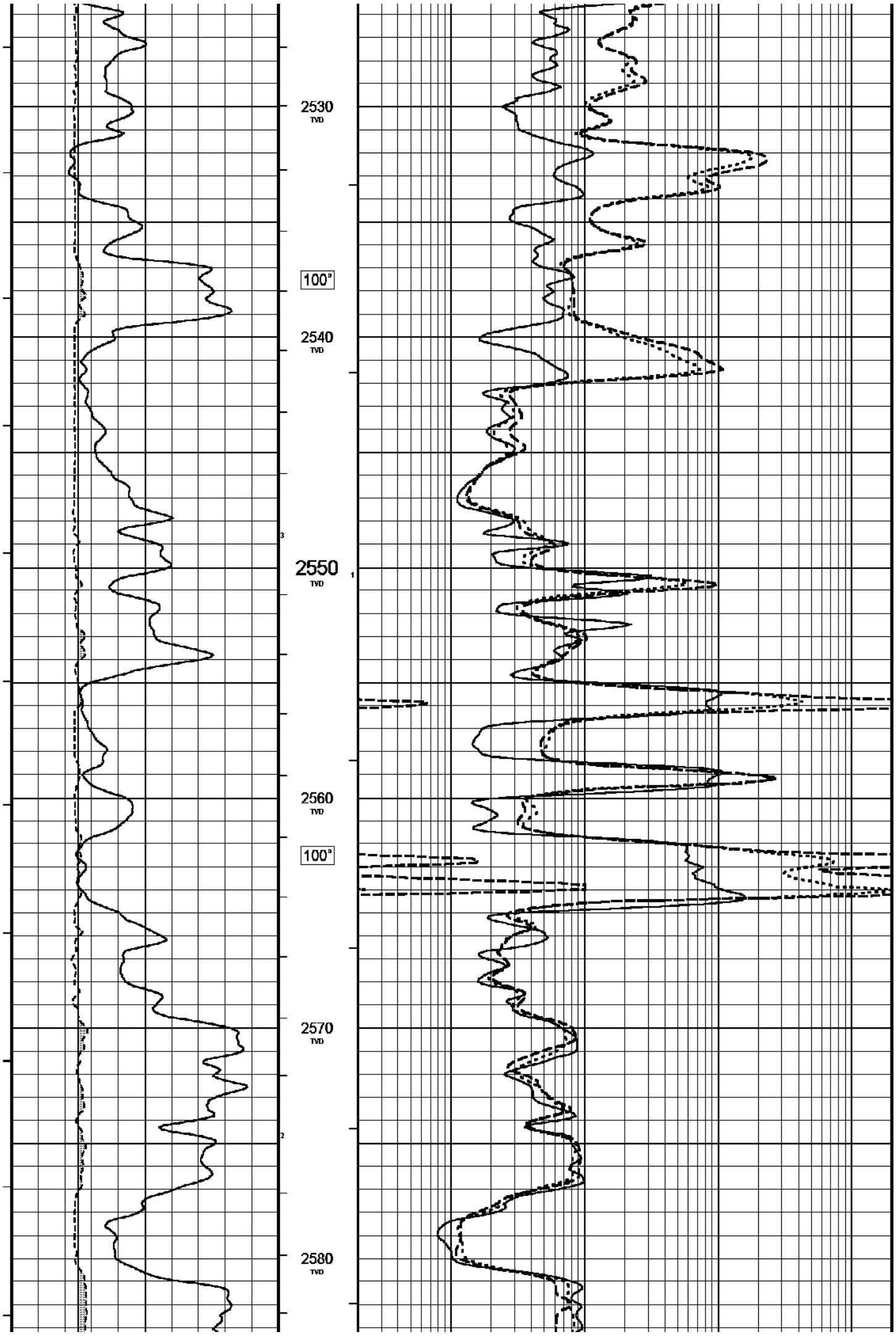

91°
2240
TVD
16
2250
TVD
2260
TVD
91°
15
2270
TVD
2280
TVD
93°
14
2290
TVD
5

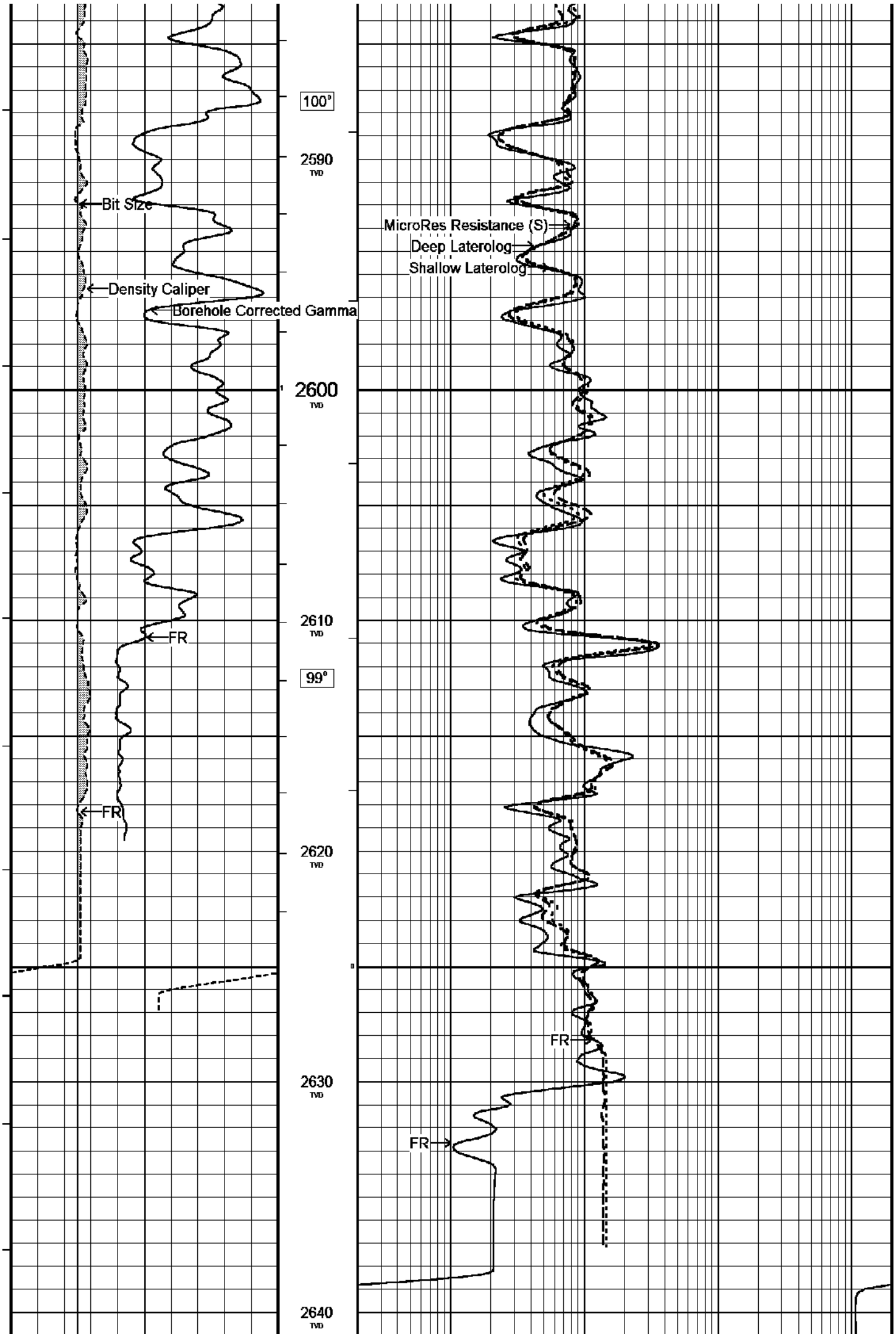

2300
TVD
2310
TVD
93°
2320
TVD
2330
TVD
94°
2340
TVD
2350
TVD

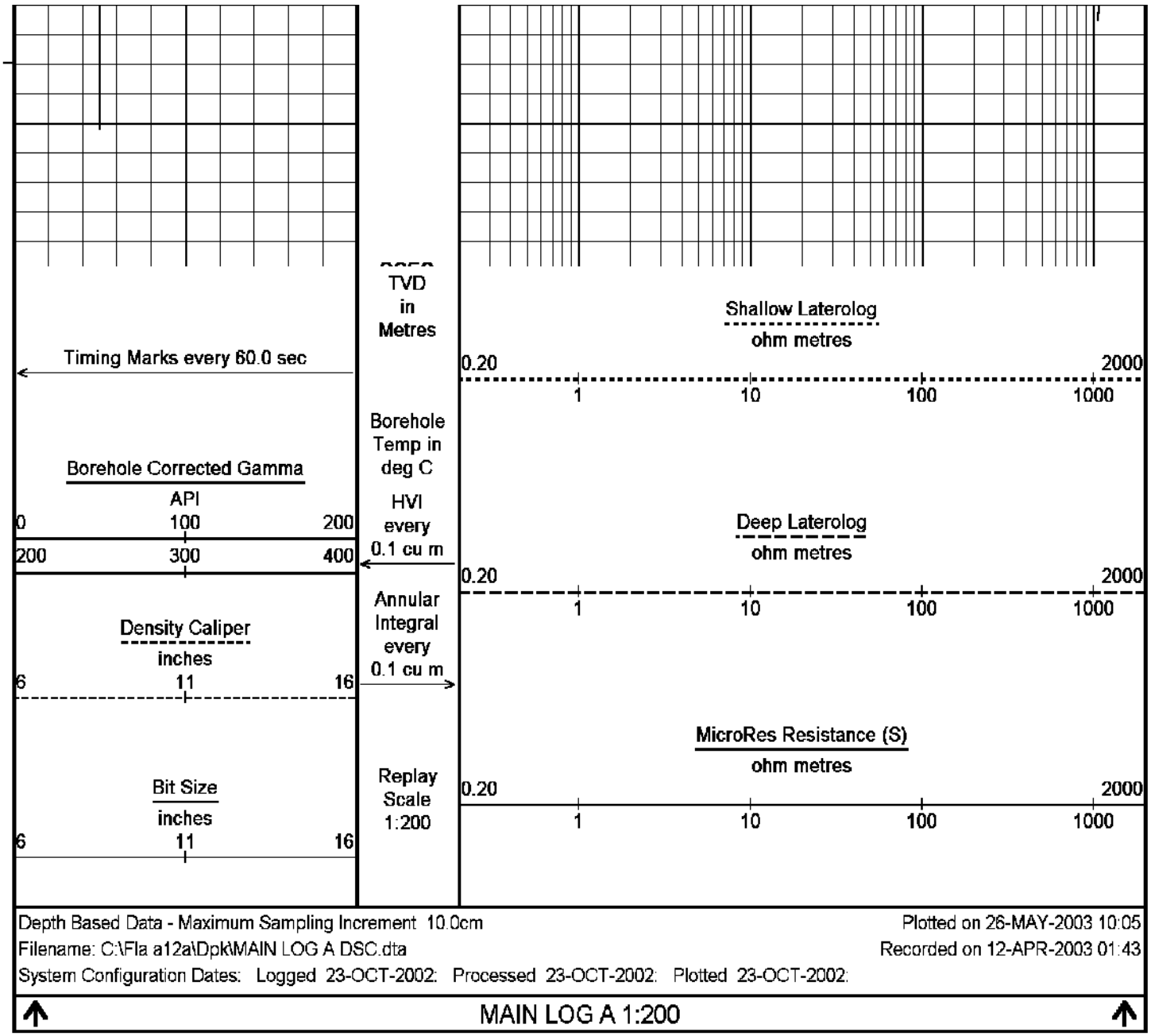

2360
TVD
95°
2370
TVD
2380
TVD
95°
2390
TVD
2400
TVD


TVD
96°
2420
TVD
2430
TVD
97°
2440
TVD
2450
TVD
2460
TVD
98°


2470
TVD
2480
TVD
99°
2490
TVD
2500
TVD
2510
TVD
99°
2520
TVD


2530
TVD
100°
2540
TVD
2550
TVD
2560
TVD
100°
2570
TVD
2580
TVD


100°
2590
TVD
Bit Size
Density Caliper
Borehole Corrected Gamma
2600
TVD
2610
TVD
FR
99°
FR
2620
TVD
2630
TVD
2640
TVD
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
FR
FR

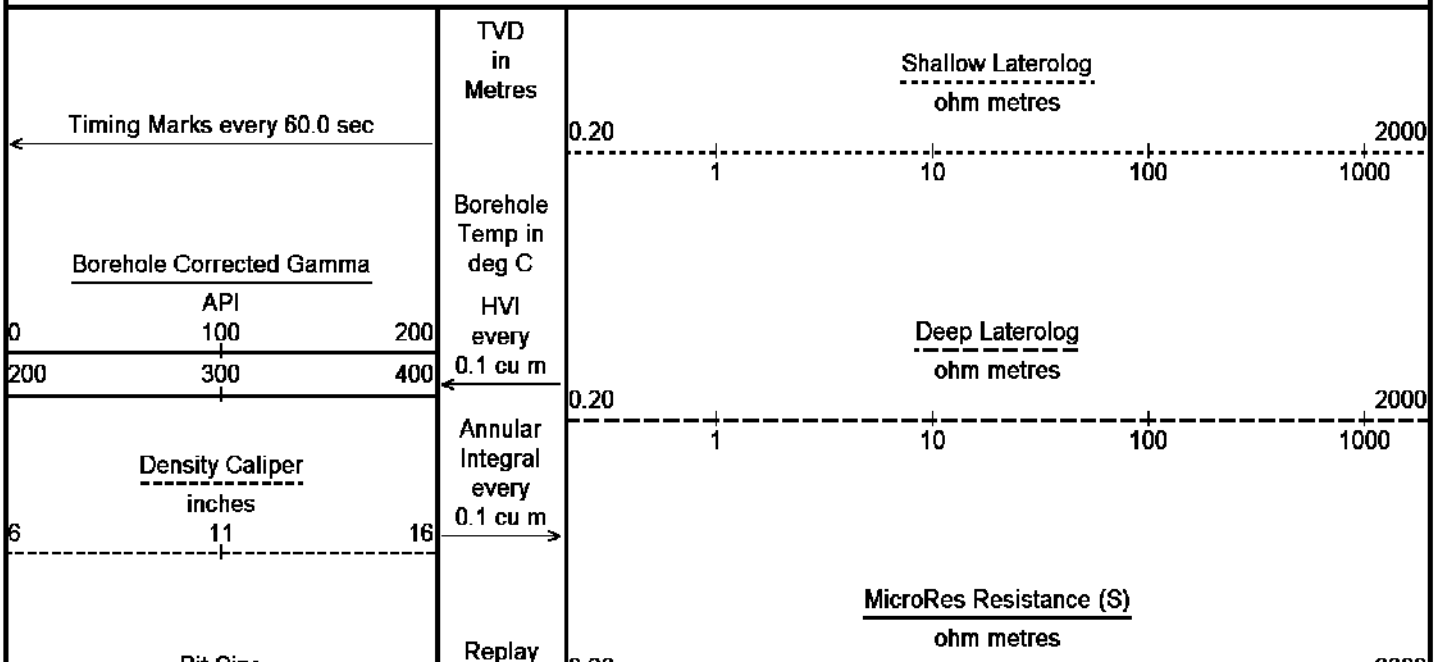


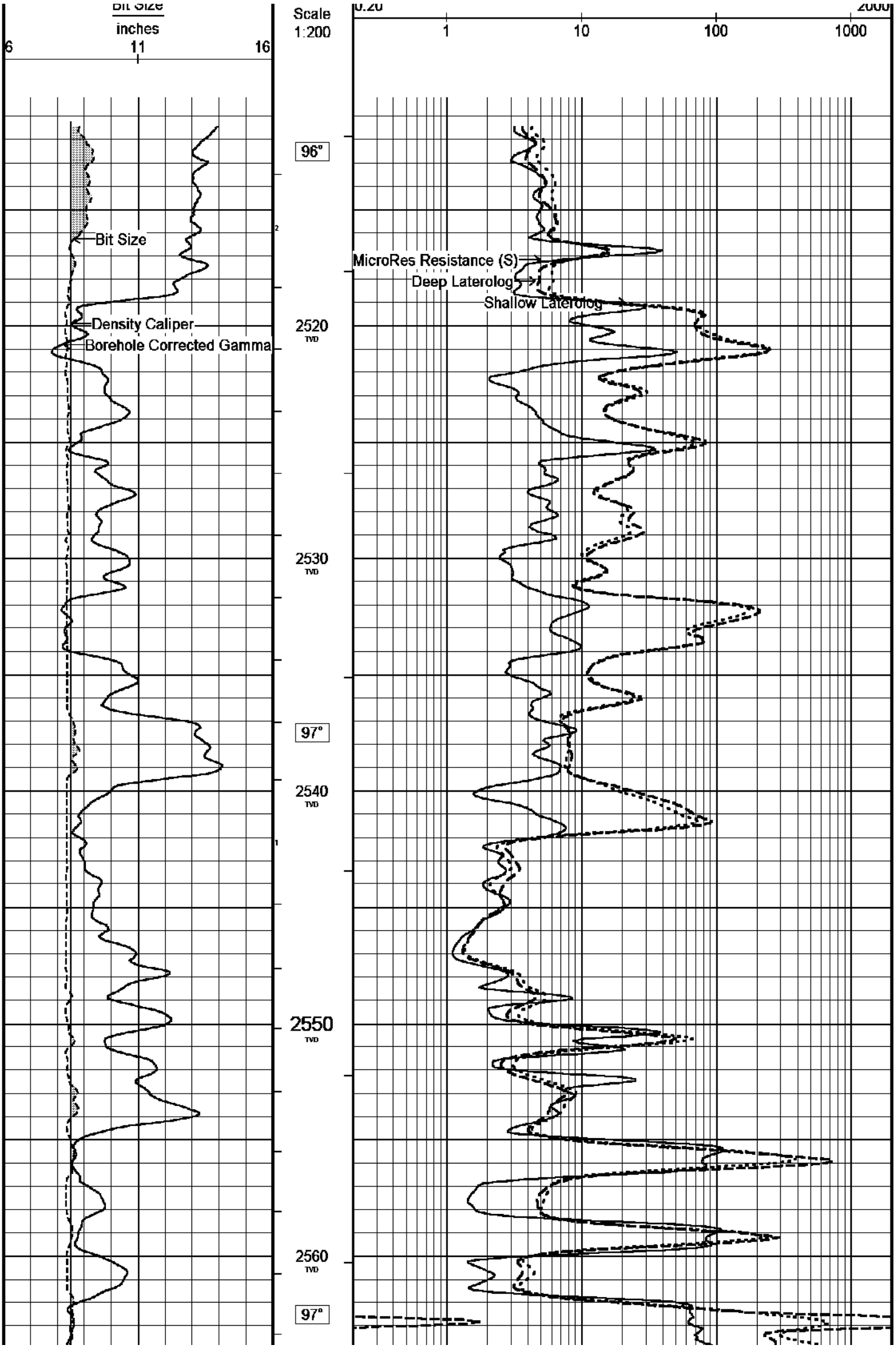
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 26-MAY-2003 10:05
Filename: C:\Fla a12a\Dpk\MAIN LOG A DSC.dta — Recorded on 12-APR-2003 01:43
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

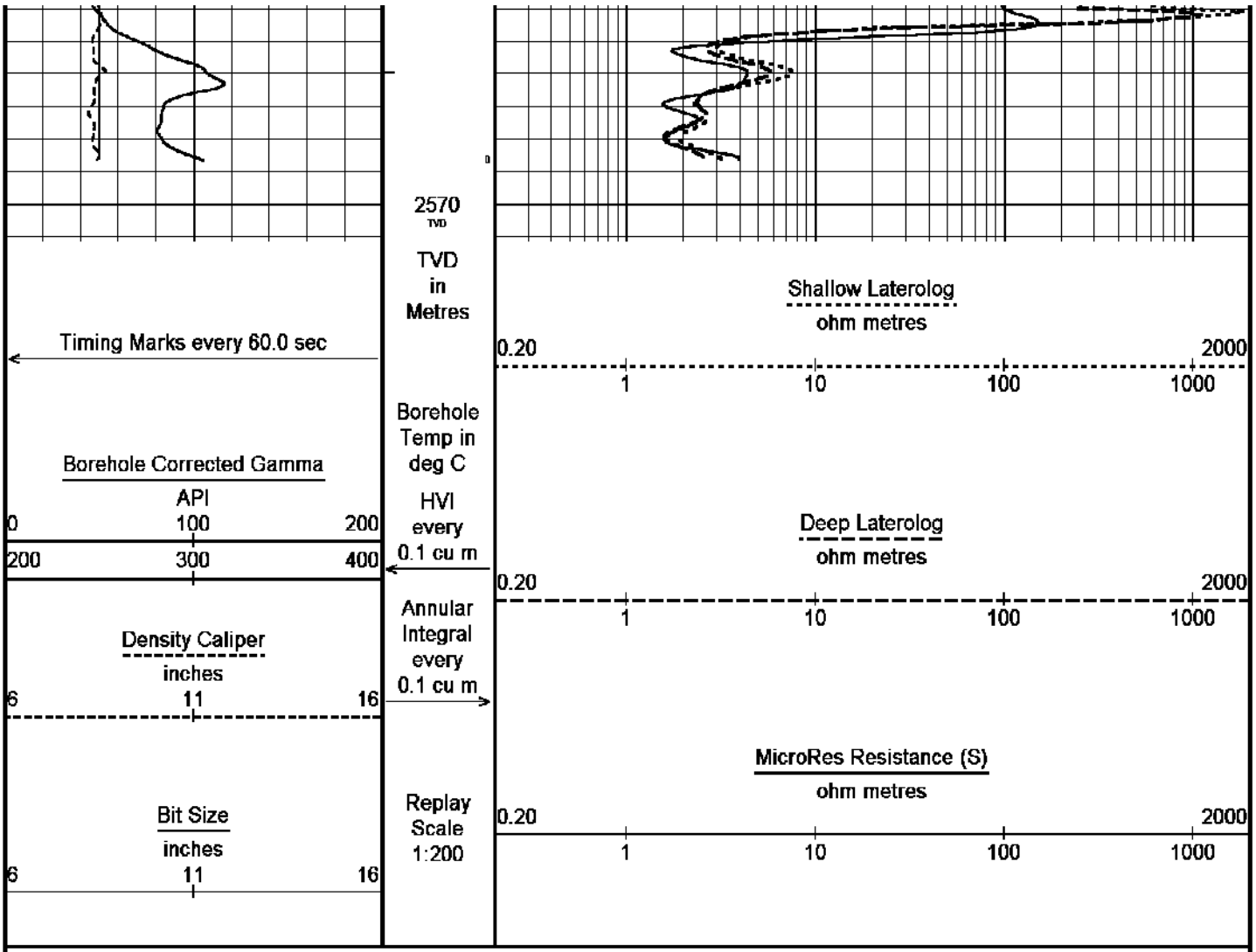
MAIN LOG A 1:200

REPEAT SECTION 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 26-MAY-2003 10:05
Filename: C:\Fla a12a\Dpk\REPEAT SECTION DSC.dta — Recorded on 12-APR-2003 01:08
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:




Bit Size
inches
6
11
16
Scale
1:200
0.20
1
10
100
1000
2000
Bit Size
Density Caliper
Borehole Corrected Gamma
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
96°
2520
TVD
2530
TVD
97°
2540
TVD
2550
TVD
2560
TVD
97°



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 26-MAY-2003 10:05

Filename: C:\Fla a12a\Dpk\REPEAT SECTION DSC.dta — Recorded on 12-APR-2003 01:08

System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

REPEAT SECTION 1:200

BEFORE SURVEY CALIBRATION

C:\Fla a12a\Dpk\MAIN LOG A DSC.dta

General Constants All 000

General Parameters

Mud Resistivity	0.05	ohm-metres
Mud Resistivity Temperature	100.00	degrees C
Water Level	0.00	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	7.00	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.61	
RWA Constant M	2.15	

Gamma Calibration MCG 076

Field Calibration on 7-APR-2003,14:34

	Measured	Calibrated (API)
Background	16	10
Calibrator (Gross)	1432	919
Calibrator (Net)	1416	909

Gamma Constants MCG 076

Gamma Calibrator Number	60	
Mud Density	1.19	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 076

Field Calibration on 19-FEB-2003,09:40

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

High Resolution Temperature Constants MCG 076

Pre-filter Length	11

Caliper Calibration MPD 067

Base Calibration on 12-APR-2003,03:34
Field Calibration on

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14809	4.61
2	24384	6.59
3	34304	8.58
4	44327	10.54
5	55504	12.61
6	N/A	N/A

Field Calibration

0	0
0.00	0.00

Laterolog Calibration MLE 015

Base Calibration on 7-APR-2003,15:42
Field Check on 12-APR-2003,01:32

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	0.0	972.3	0.0	1327.3
Deep	0.0	972.9	0.0	852.7
Groningen	0.0	996.2	0.0	852.7

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.1	49.1
Deep	31.5	31.5
Groningen	246.3	246.3

Laterolog Constants MLE 015

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3273	
Deep Laterolog K Factor	0.8527	
Groningem Laterolog K Factor	0.8527	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	Groningen Electrode	

Micro Laterolog Calibration MMR 005

Base Calibration on 1-APR-2003,17:03
Field Check on 12-APR-2003,01:31

Base Calibration

	Measured		Calibrated (ohm-m)	
	Ref 1	Ref 2	Ref 1	Ref 2
	0.0	9843.5	0.0	196.0

Base Check (ohm-m)	Field Check (ohm-m)
8.0	8.0

Micro Laterolog Constants MMR 005

Micro Laterolog K Factor	0.0196	
Standoff Offset	N/A	inches

DOWNHOLE EQUIPMENT

All measurements relative to tool zero.

Compact Inline Standoff B
MIS 52 Length: 0.65 m Weight: 15.43 lb

Compact Stiff Bridle Electrode Sub.
MBE 9 Length: 3.76 m Weight: 94.80 lb

Compact Inline Standoff B
MIS 77 Length: 0.65 m Weight: 15.43 lb

Compact Stiff Bridle Electrode Sub.
MBE 5 Length: 3.76 m Weight: 94.80 lb

31.84 m SPDL - Spontaneous Potential

Compact Inline Standoff B
MIS 31 Length: 0.65 m Weight: 15.43 lb

Compact Gamma
MCG 76 Length: 2.65 m Weight: 63.93 lb

26.85 m GGCE - Borehole Corrected Gamma

25.96 m CGXT - MCG External Temperature

Compact Knuckle Joint
SKJ 46 Length: 0.66 m Weight: 24.25 lb

Compact Swivel Head Adaptor
SHA 27 Length: 0.83 m Weight: 26.46 lb

Compact Inline Bowspring A
MIS 24 Length: 1.74 m Weight: 33.07 lb

Compact Neutron
MDN 69 Length: 1.53 m Weight: 50.71 lb

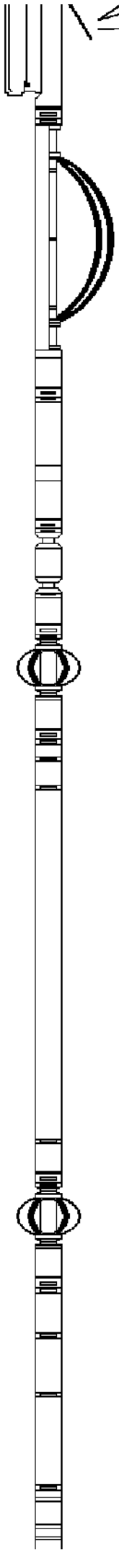
21.75 m NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD 67 Length: 2.92 m Weight: 90.39 lb

19.07 m CLDC - Density Caliper

18.85 m DCOR - Density Correction

16.83 m DEN - Compensated Density
18.83 m PDPE - PE



Compact Inline Bowspring A
MIS 25 Length: 1.74 m Weight: 33.07 lb

Compact Swivel Head Adaptor
SHA 28 Length: 0.83 m Weight: 26.46 lb

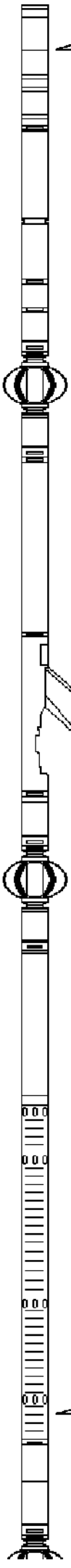
Compact Knuckle Joint
SKJ 45 Length: 0.66 m Weight: 24.25 lb

Compact Inline Standoff B
MIS 53 Length: 0.65 m Weight: 15.43 lb

Compact Upper Guard Sub.
MUG 17 Length: 2.74 m Weight: 68.34 lb

Compact Inline Standoff B
MIS 49 Length: 0.65 m Weight: 15.43 lb

Compact Laterolog Electrode Sub.
MLE 15 Length: 3.76 m Weight: 92.59 lb



8.93 m DSLL - Shallow Laterolog
8.93 m DGLL - Deep Laterolog

Compact Inline Standoff B
MIS 76 Length: 0.65 m Weight: 15.43 lb

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.57 lb

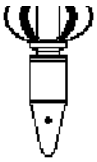
4.35 m MRRS - MicroRes Resistance (S)
4.35 m MATC - MMR Caliper

Compact Inline Standoff B
MIS 73 Length: 0.65 m Weight: 15.43 lb

Compact Sonic
MSS 28 Length: 3.82 m Weight: 72.75 lb

0.00 m DT35 - 3-5' Compensated Sonic
Tool Zero (1.62m from bottom)

Compact Inline Standoff B
MIS 30 Length: 0.65 m Weight: 15.43 lb



Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.61 lb

Total Length: 39.51 m Total Weight: 1007.51 lb

COMPANY	ESSO AUSTRALIA PTY. LTD.
WELL	FLOUNDER A12a
FIELD	GIPPSLAND BASIN
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing		metres	First Reading	2636.90	metres
Elevation Drill Floor	33.85	metres	Depth Driller	2636.40	metres
Elevation Ground Level	-93.00	metres	Depth Logger	2637.40	metres

Reeves

DUAL LATEROLOG

GAMMA RAY

1:200 TVD