

# Reeves

## DUAL LATEROLOG - GR

### DENSITY - NEUTRON

### 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 COMPENSATED SONIC			
API Number							
Permit Number							
Permanent Datum MSL				, Elevation 0 metres			
Log Measured From RT@33.85 metres above Permanent Datum							
Drilling Measured From RT							
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	KC/PHPA/GLY						
Density / Viscosity	9.90 lb/USg			68.00 sec/cst			
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  
BTM 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\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

## Neutron Check MDN 069

Before Survey Check on 7-APR-2003 14:52  
After Survey Check on 12-APR-2003,07:35

Near (cps)		Far (cps)	
Before	After	Before	After
1846	1818	2708	2648
Ratio			
Before	After		
0.682	0.687		

## Photo Density Check MPD 067

Before Survey Check on 7-APR-2003 14:40  
After Survey Check on 12-APR-2003,07:40

### Density Check

Near		Far	
Before	After	Before	After
957.7	954.7	1152.3	1153.1

### PE Check

	Before	After
WS	180.1	179.6
WH	831.6	828.5

## 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

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 B 1:200

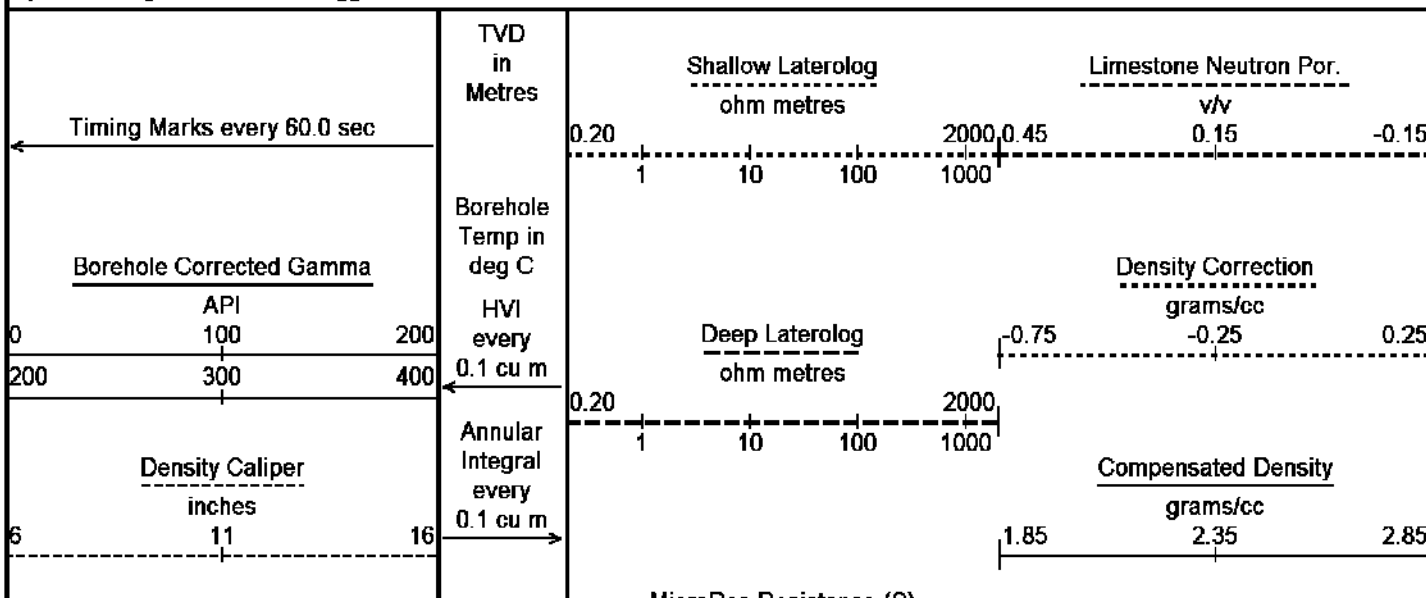
Depth Based Data - Maximum Sampling Increment 10.0cm

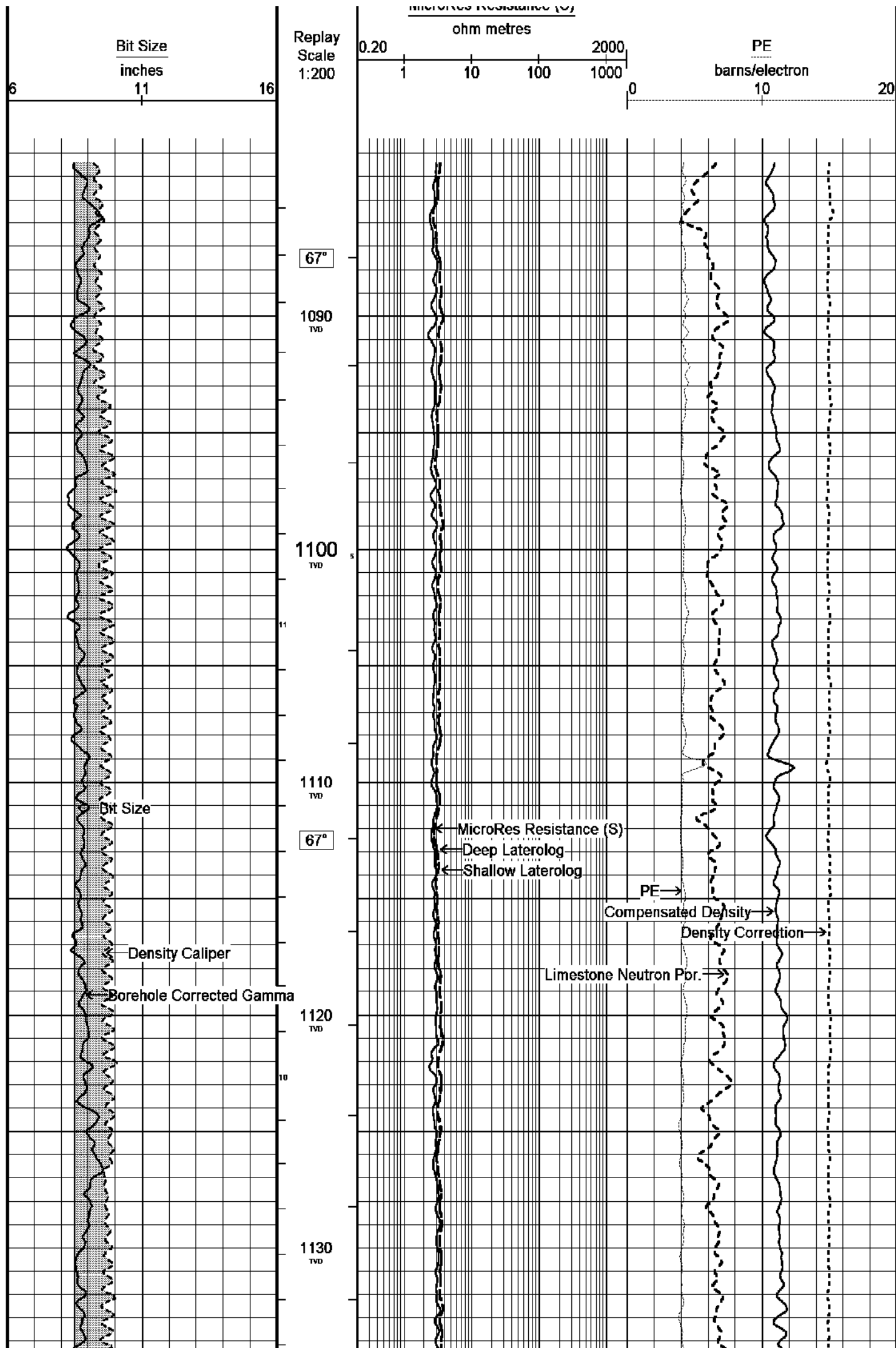
Plotted on 24-MAY-2003 13:21

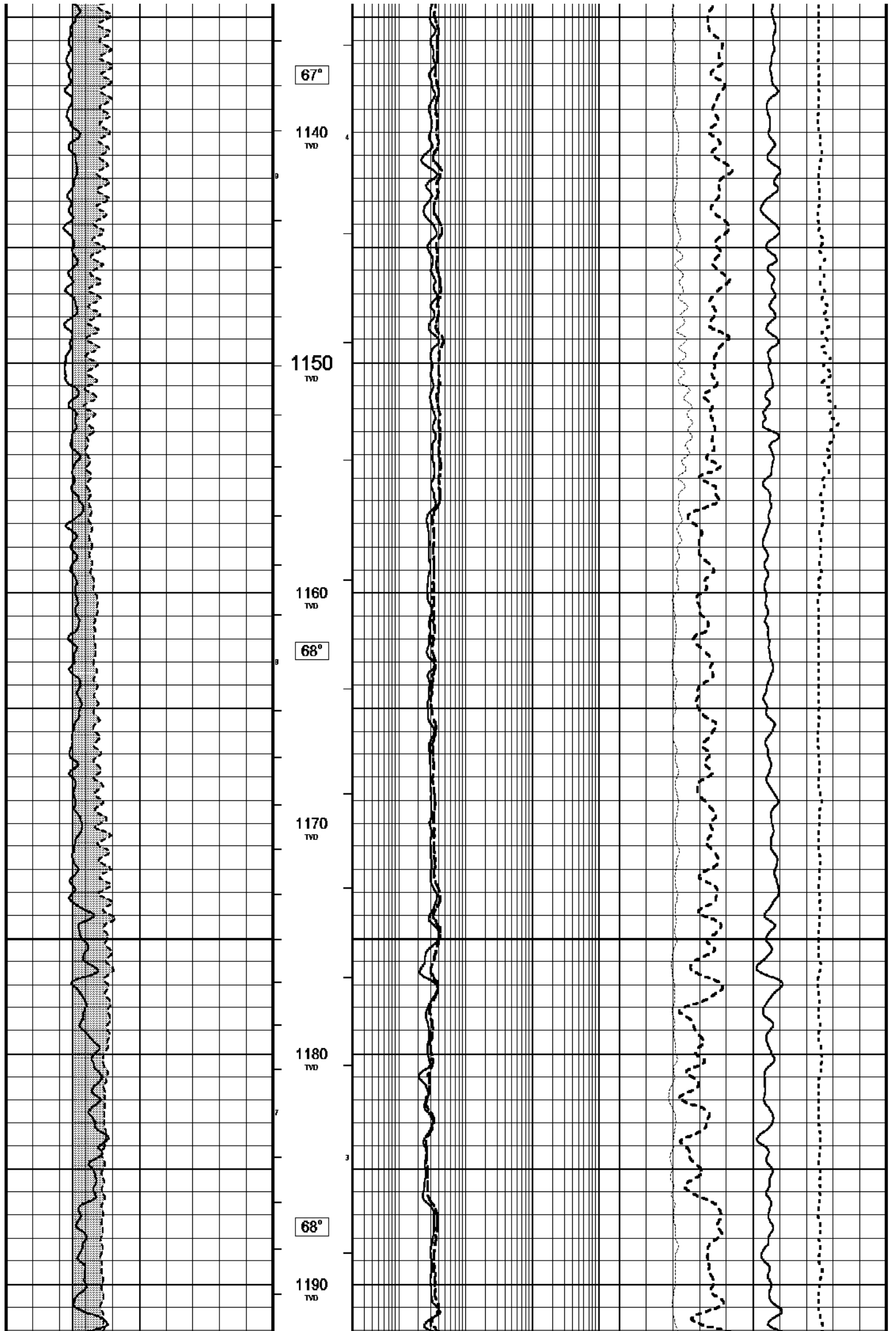
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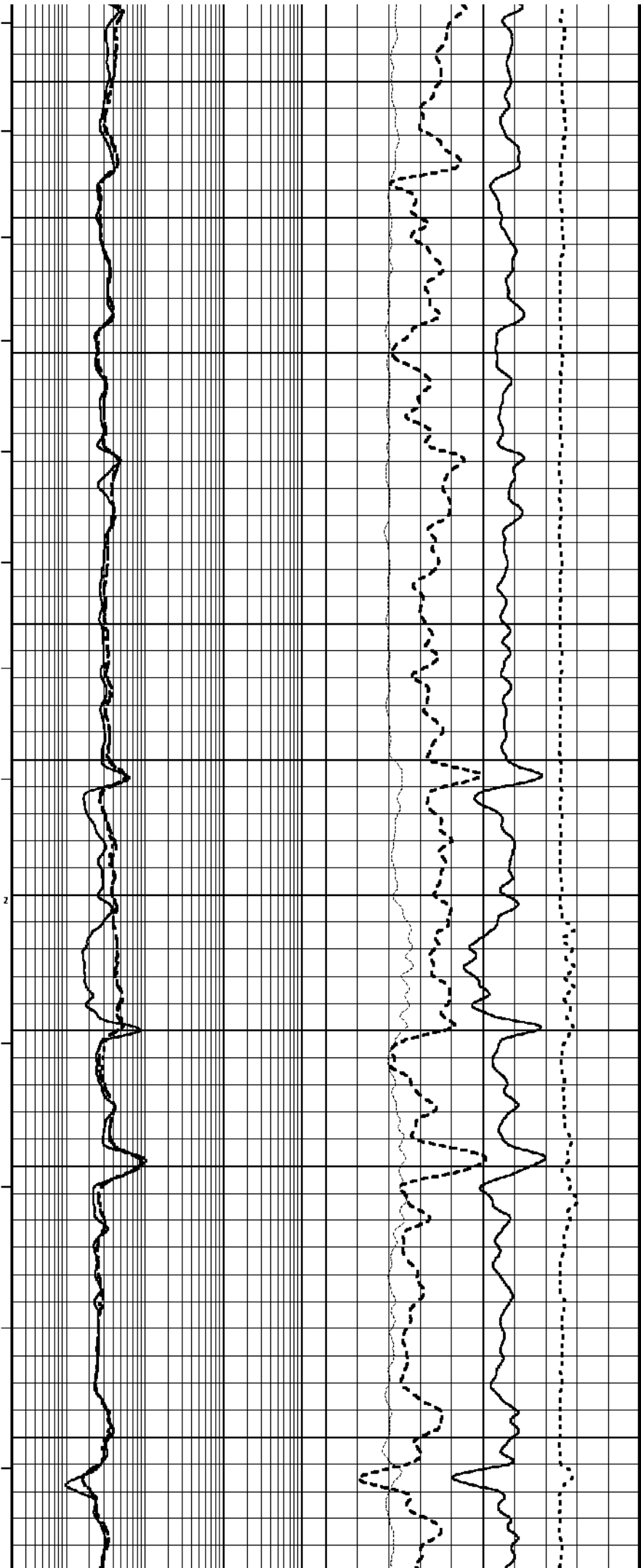
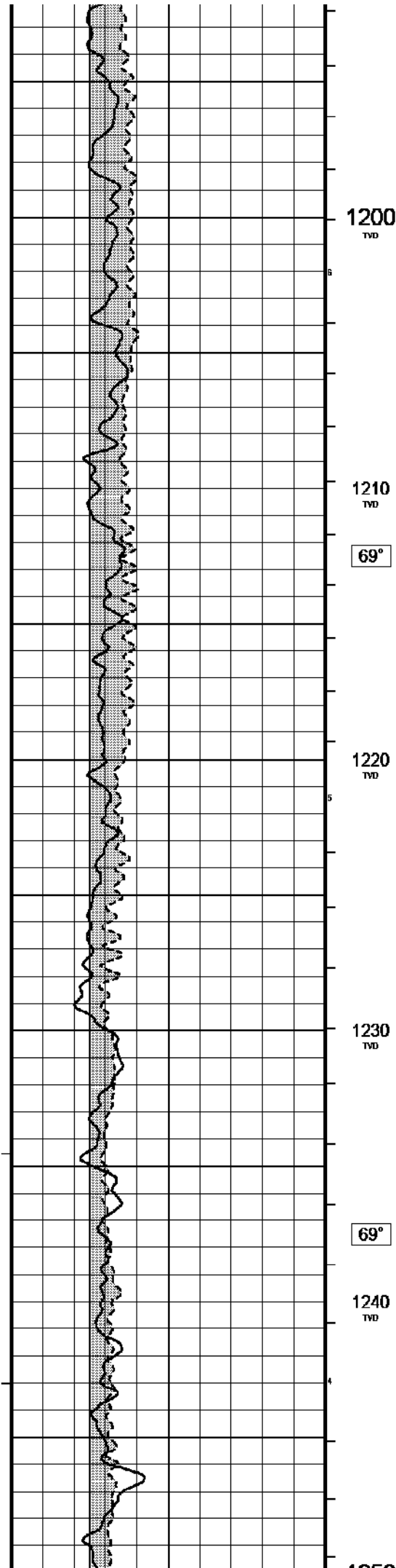
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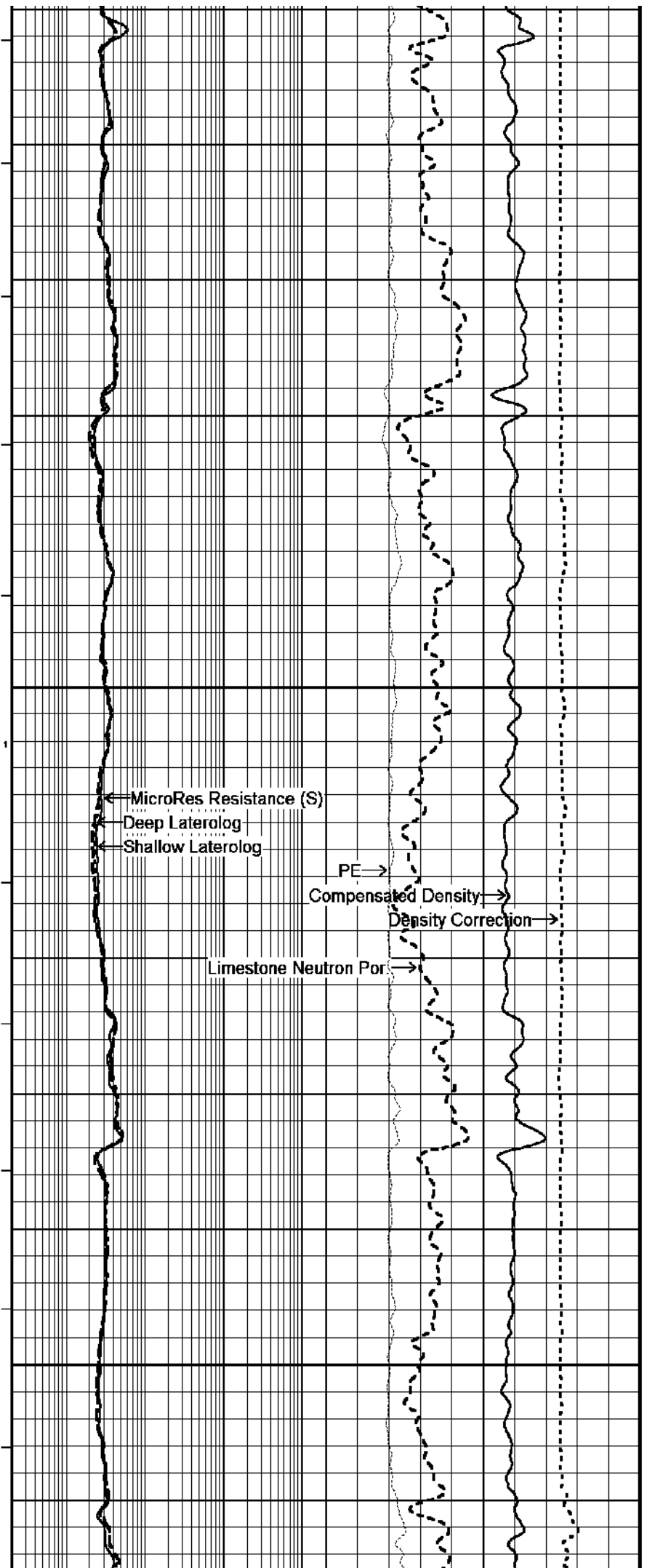
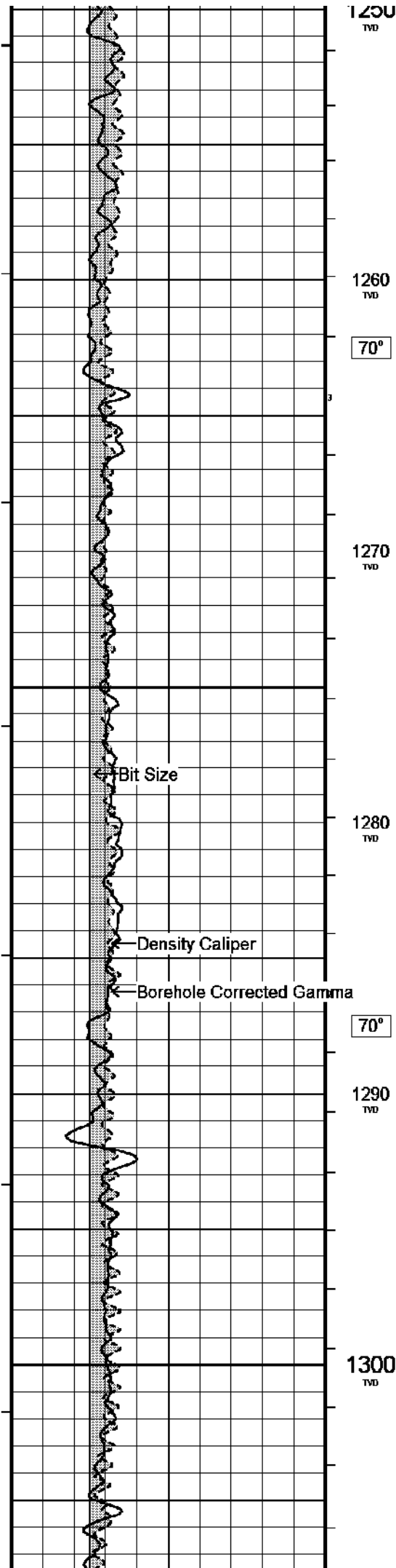
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:

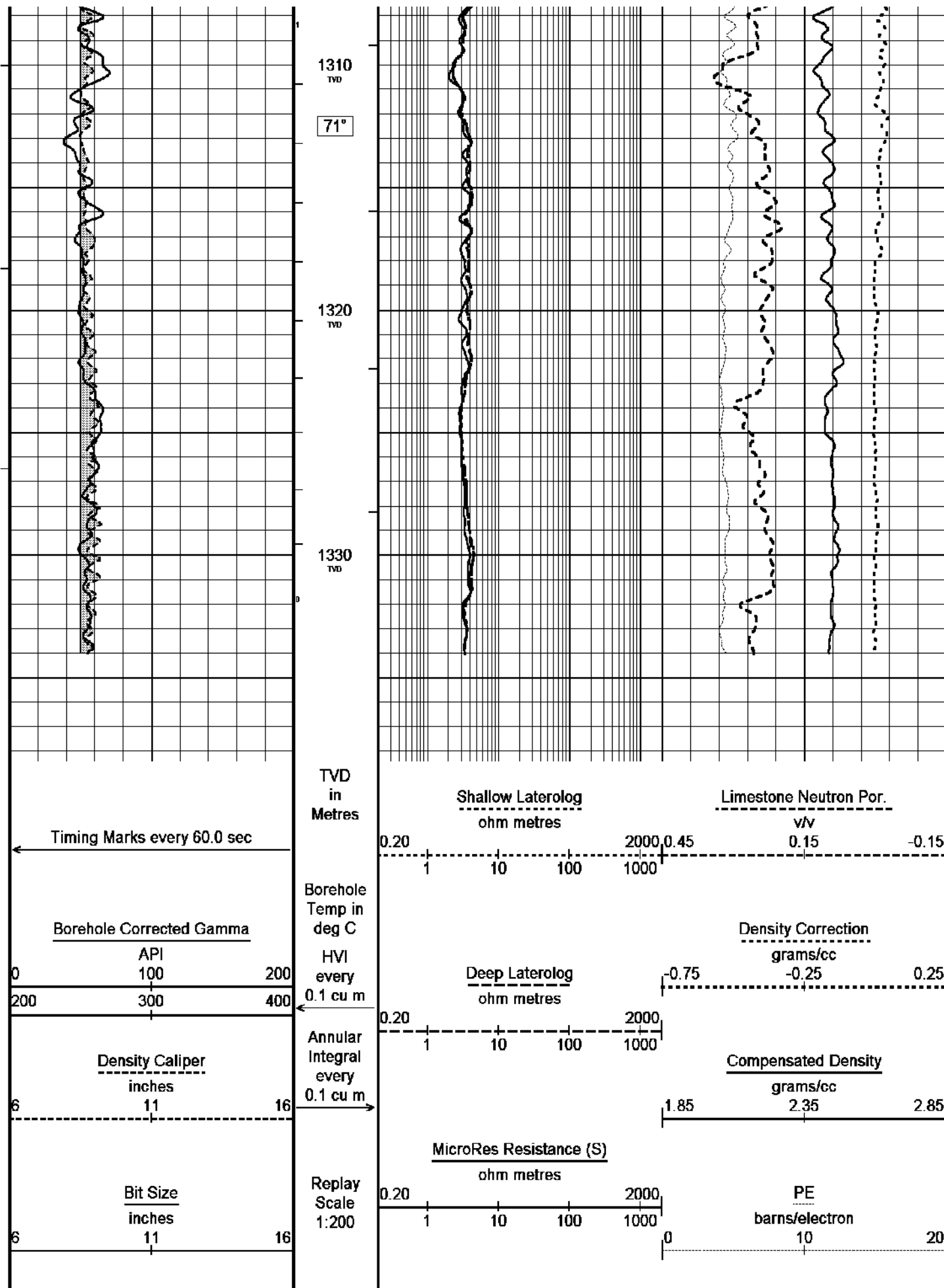












Depth Based Data - Maximum Sampling Increment: 10.0cm

Filename: C:\Fla a12a\MAIN LOG B DSC.dta

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

Plotted on 24-MAY-2003 13:21

Recorded on 12-APR-2003 04:49

MAIN LOG B 1:200

# MAIN LOG A 1:200

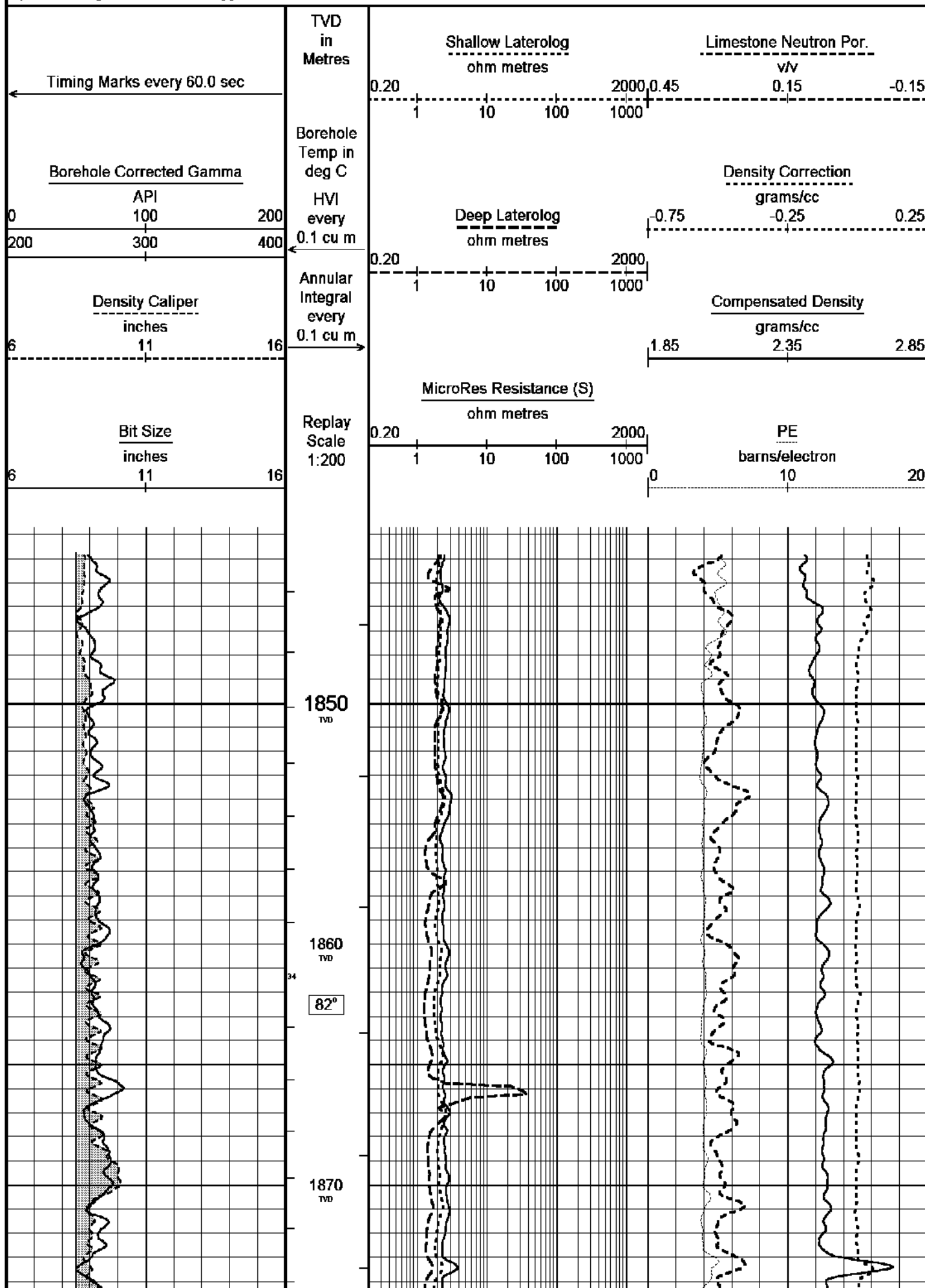
Depth Based Data - Maximum Sampling Increment 10.0cm

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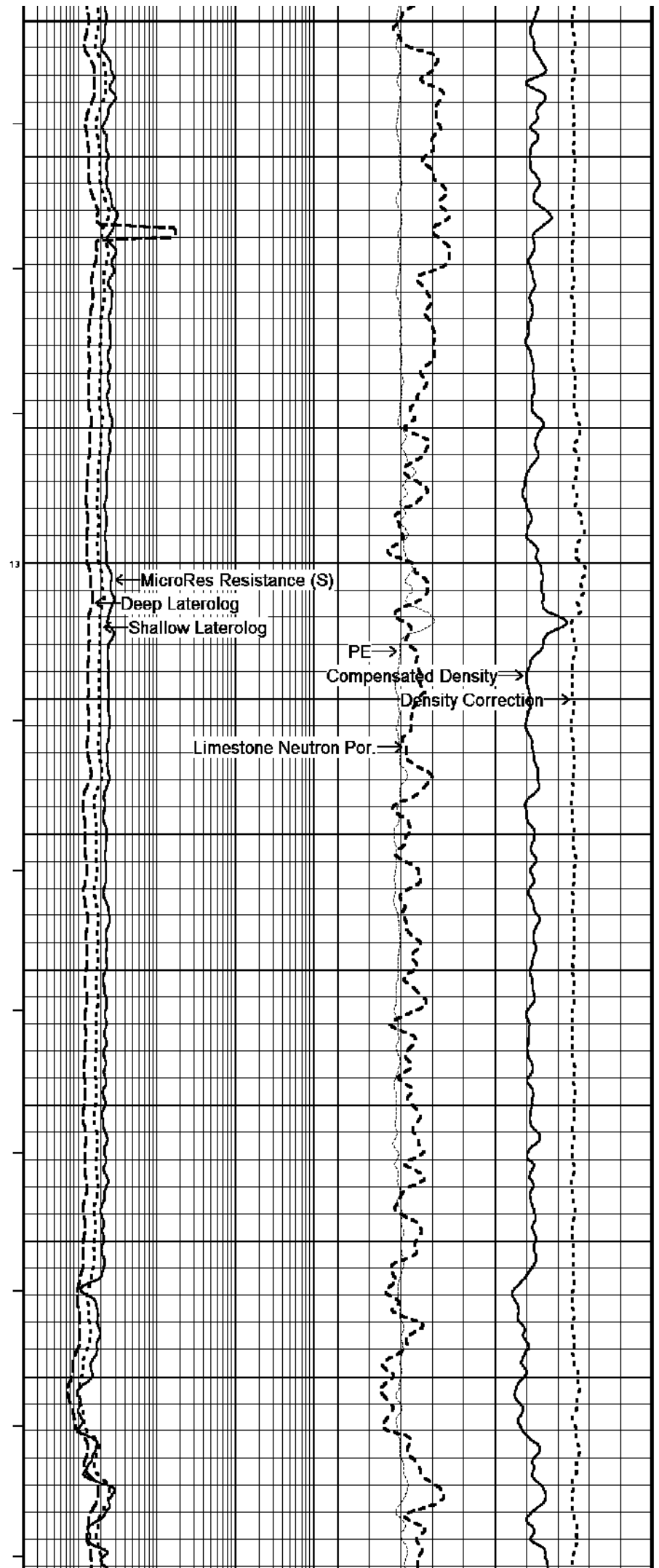
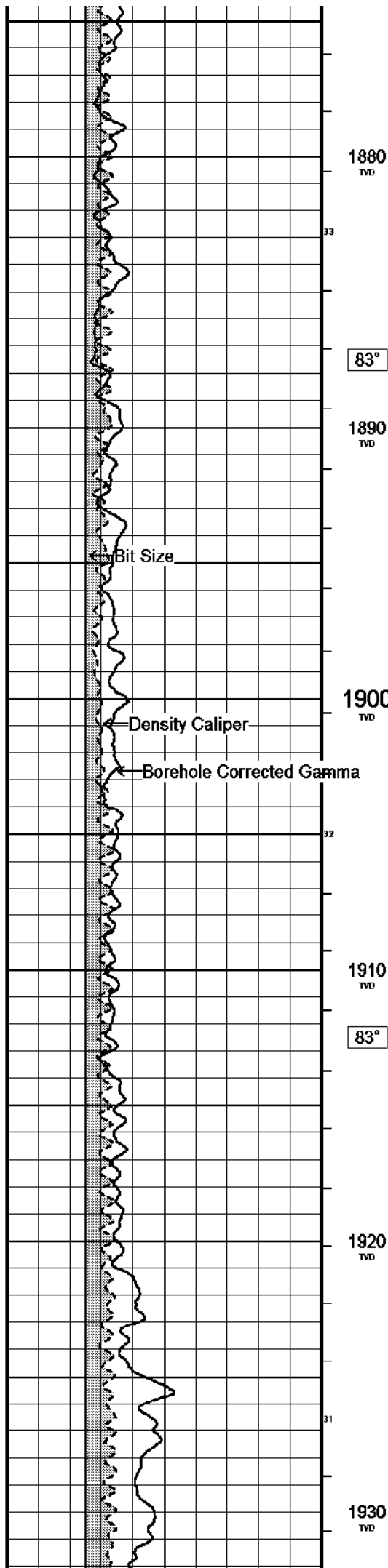
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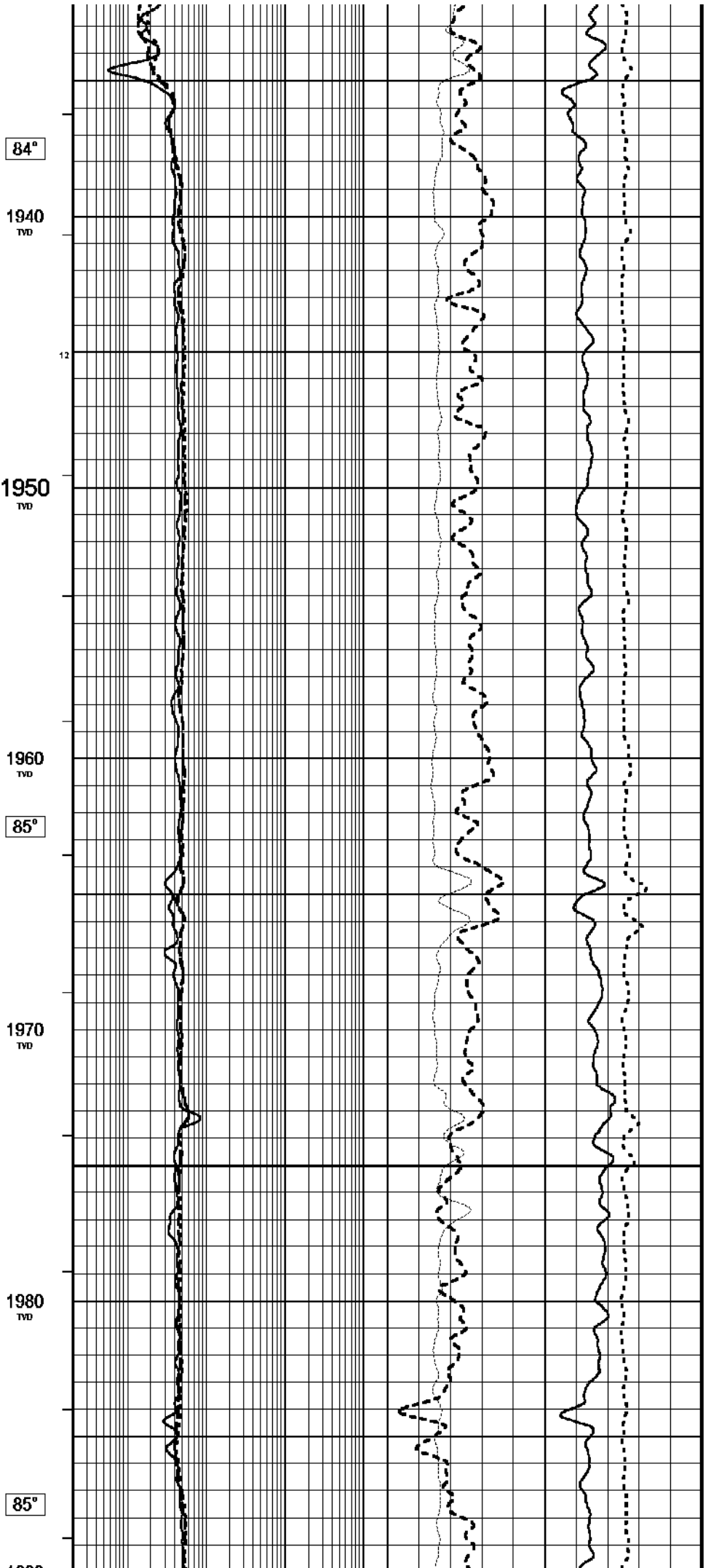
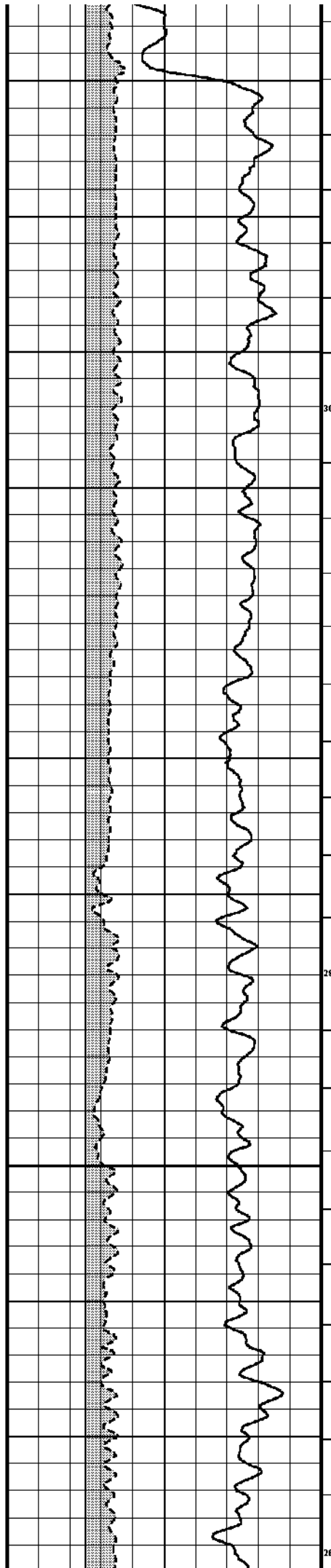
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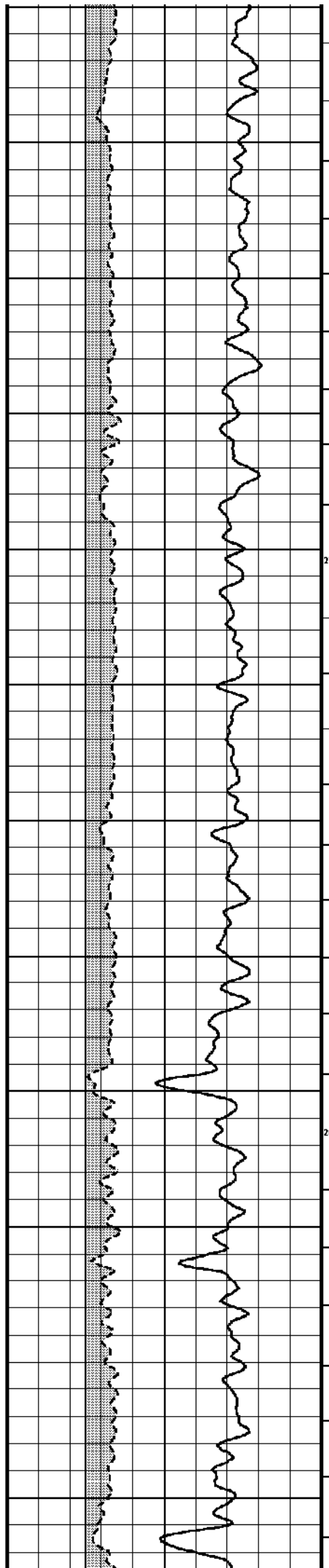
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:











1990  
TVD

2000  
TVD

2010  
TVD

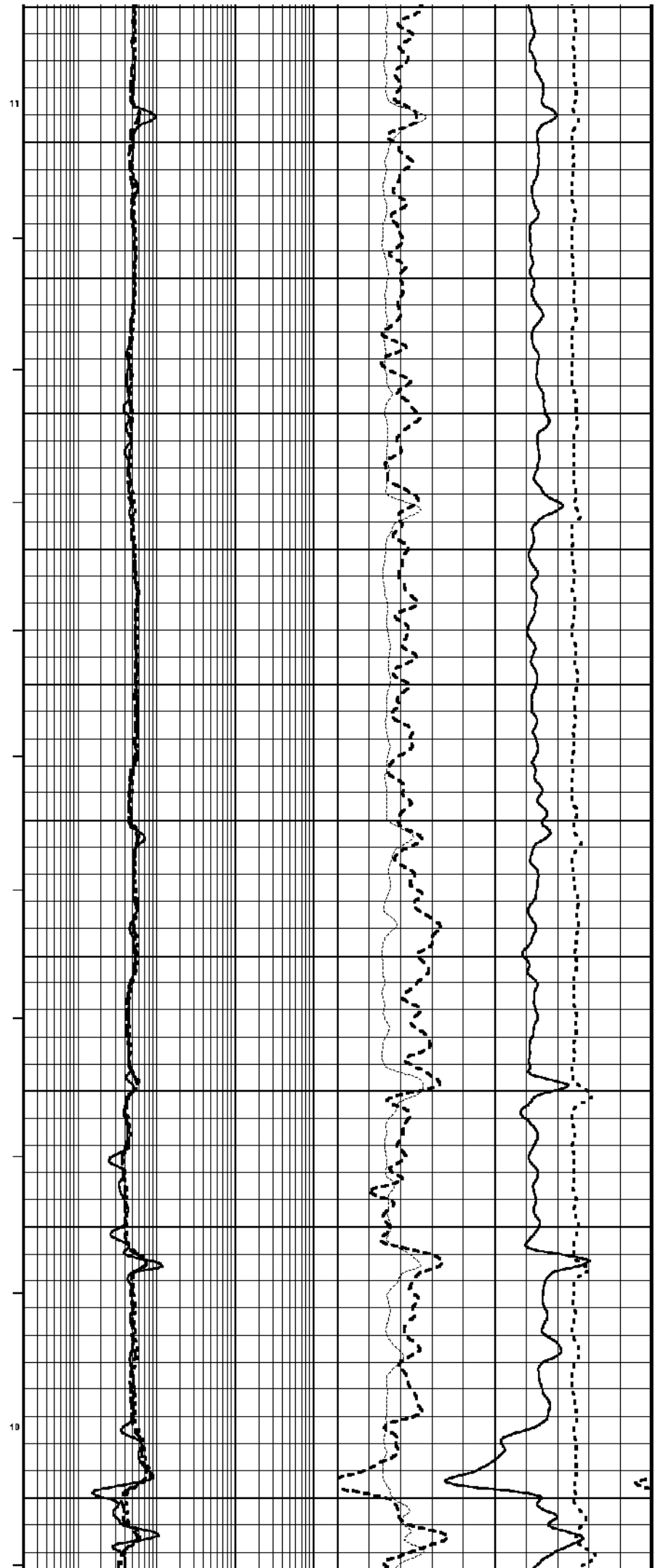
86°

2020  
TVD

2030  
TVD

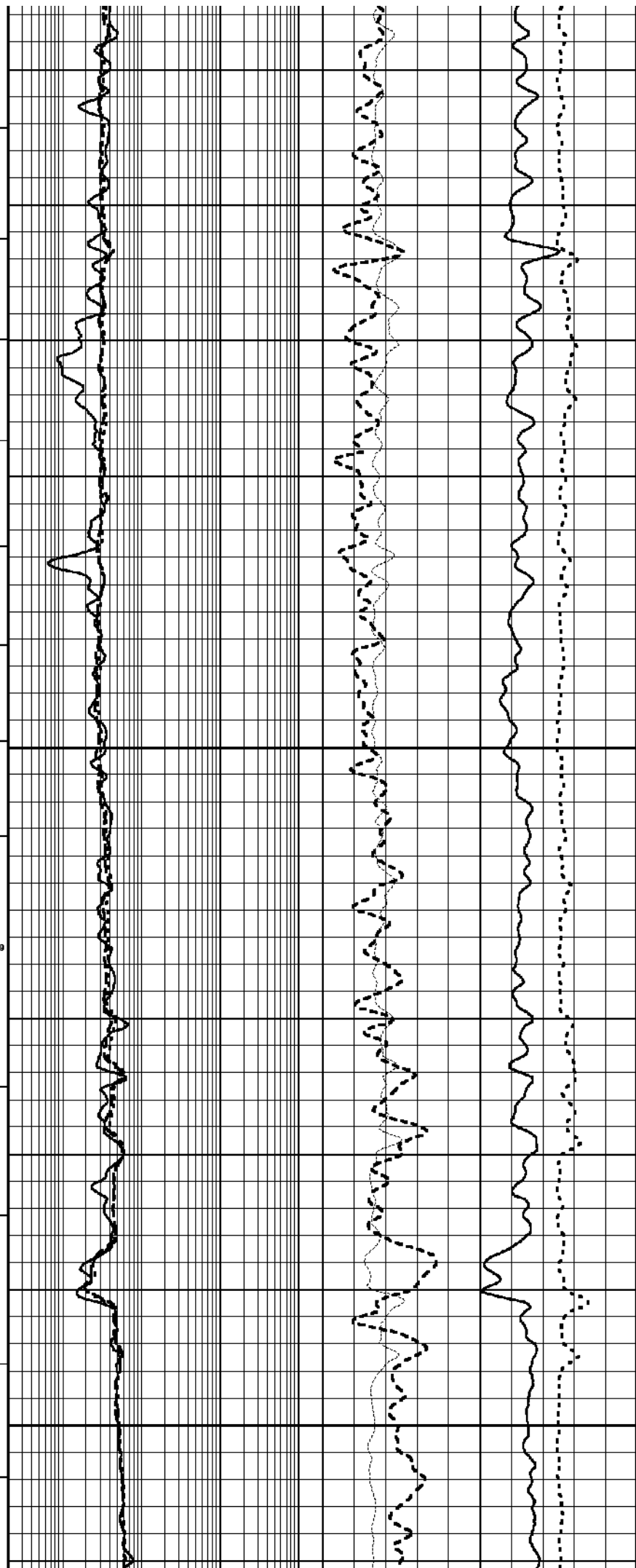
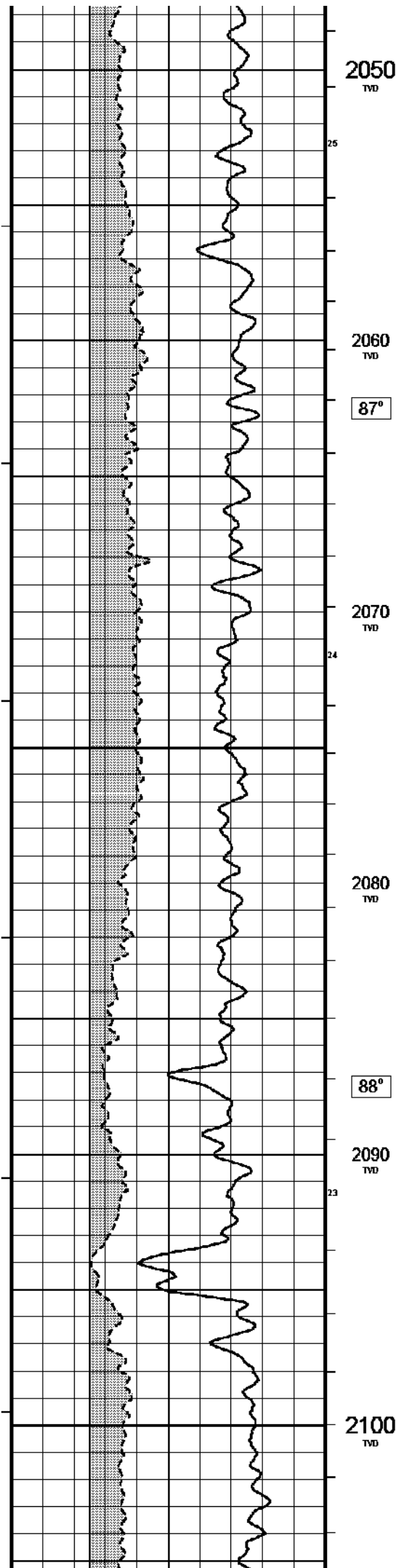
86°

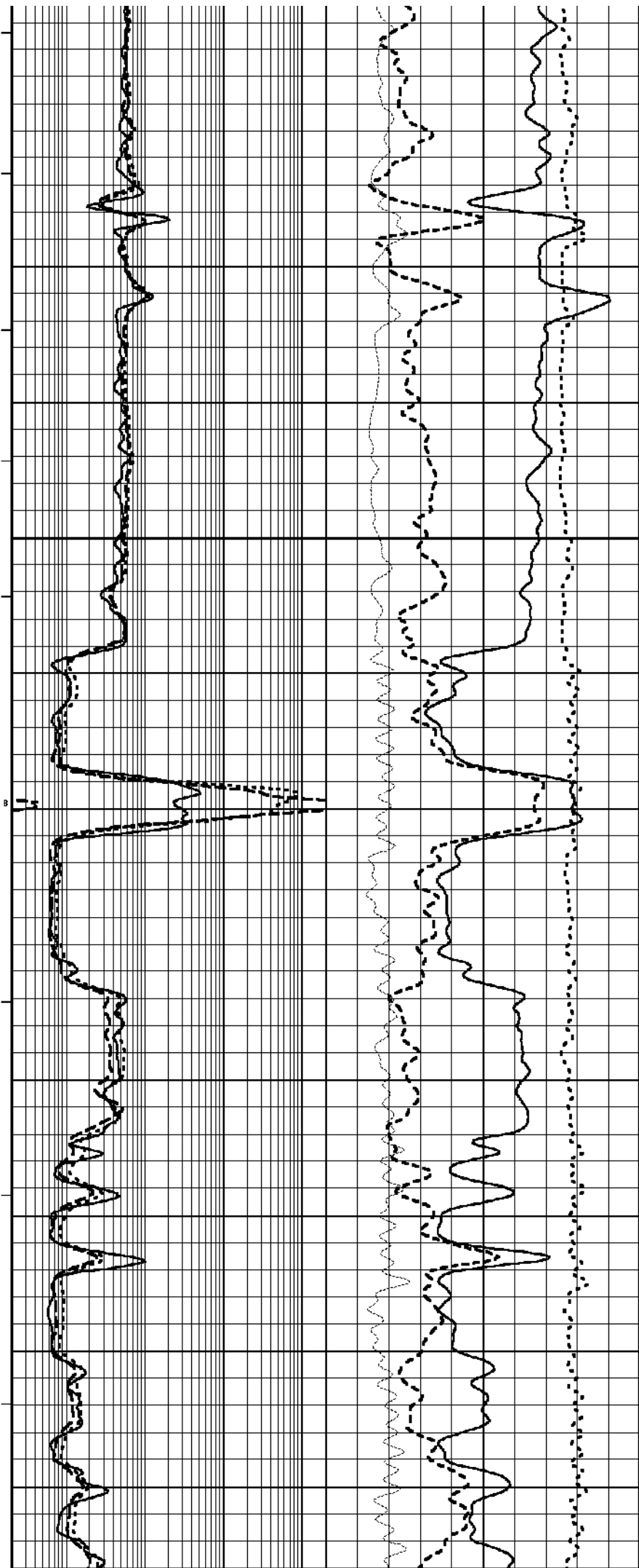
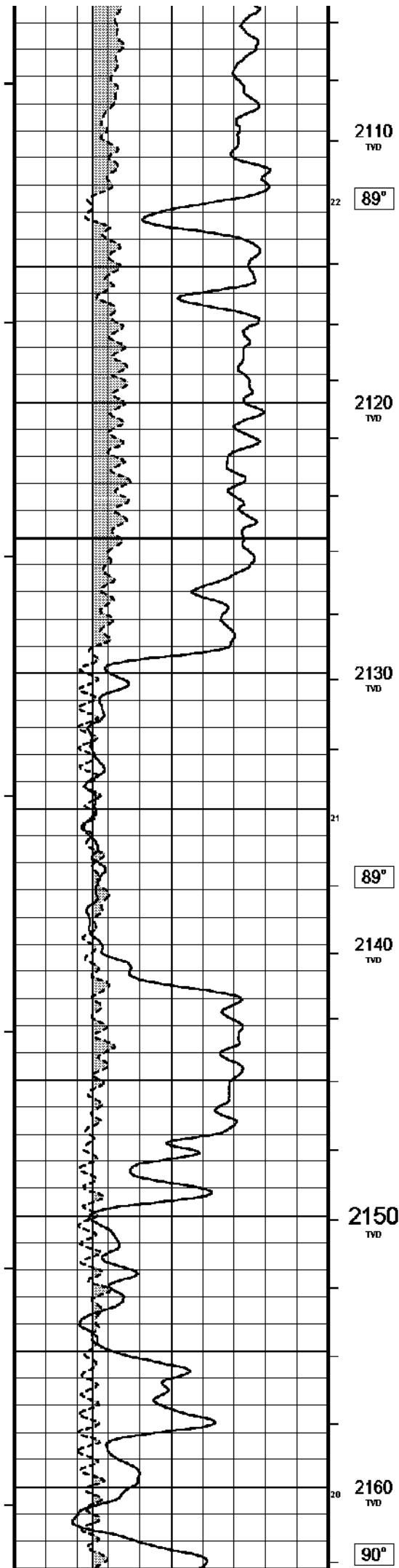
2040  
TVD

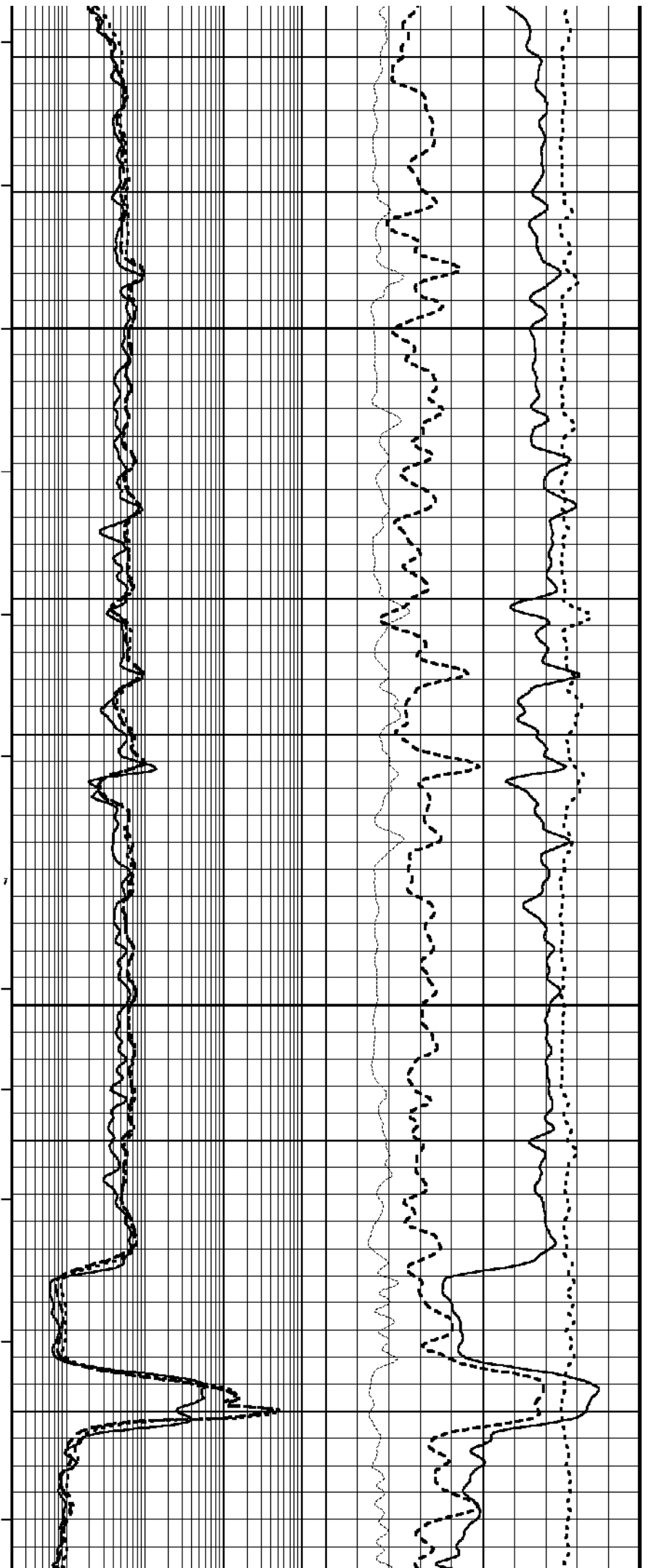
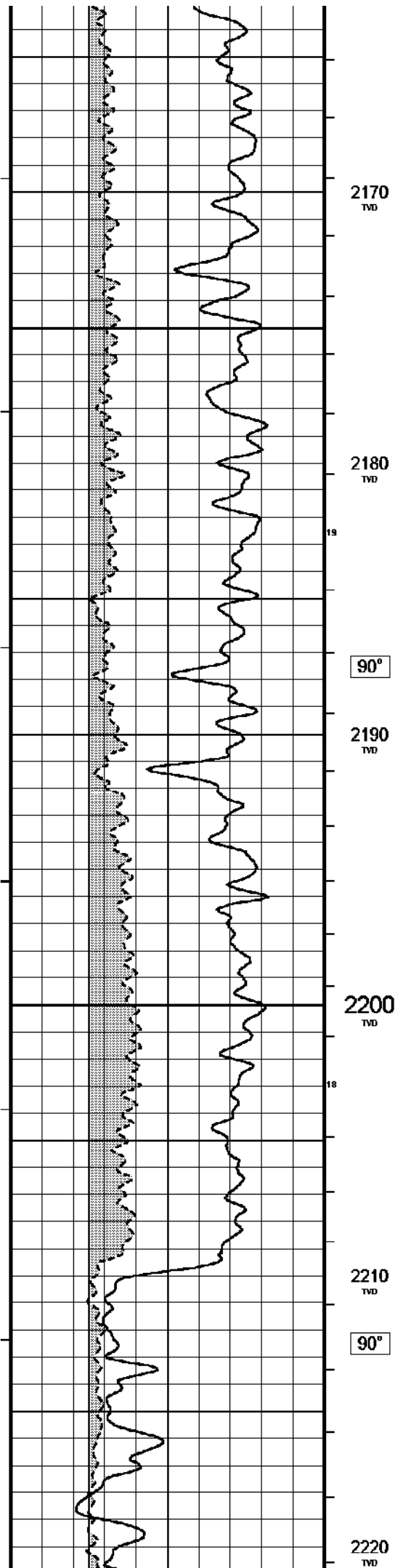


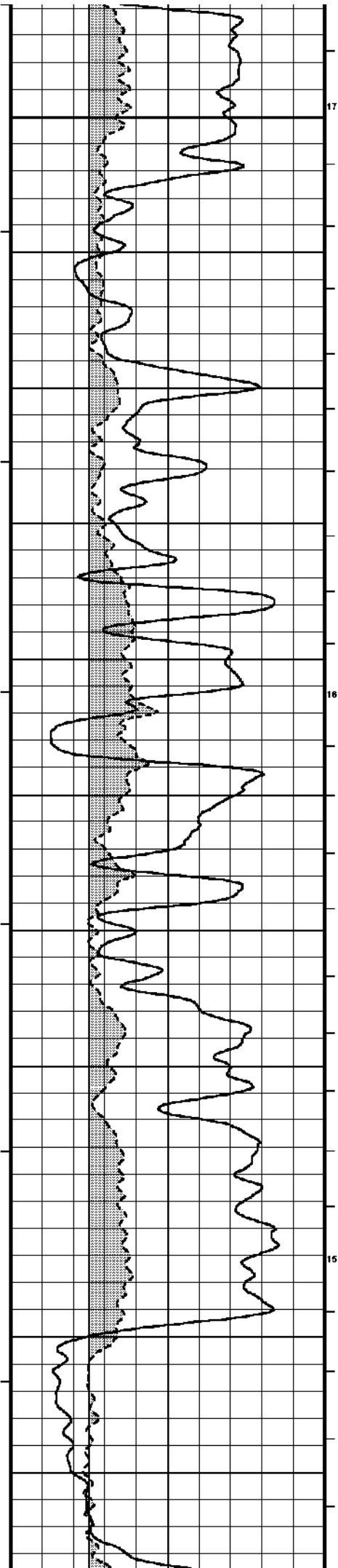
11

10









2230  
TVD

91°

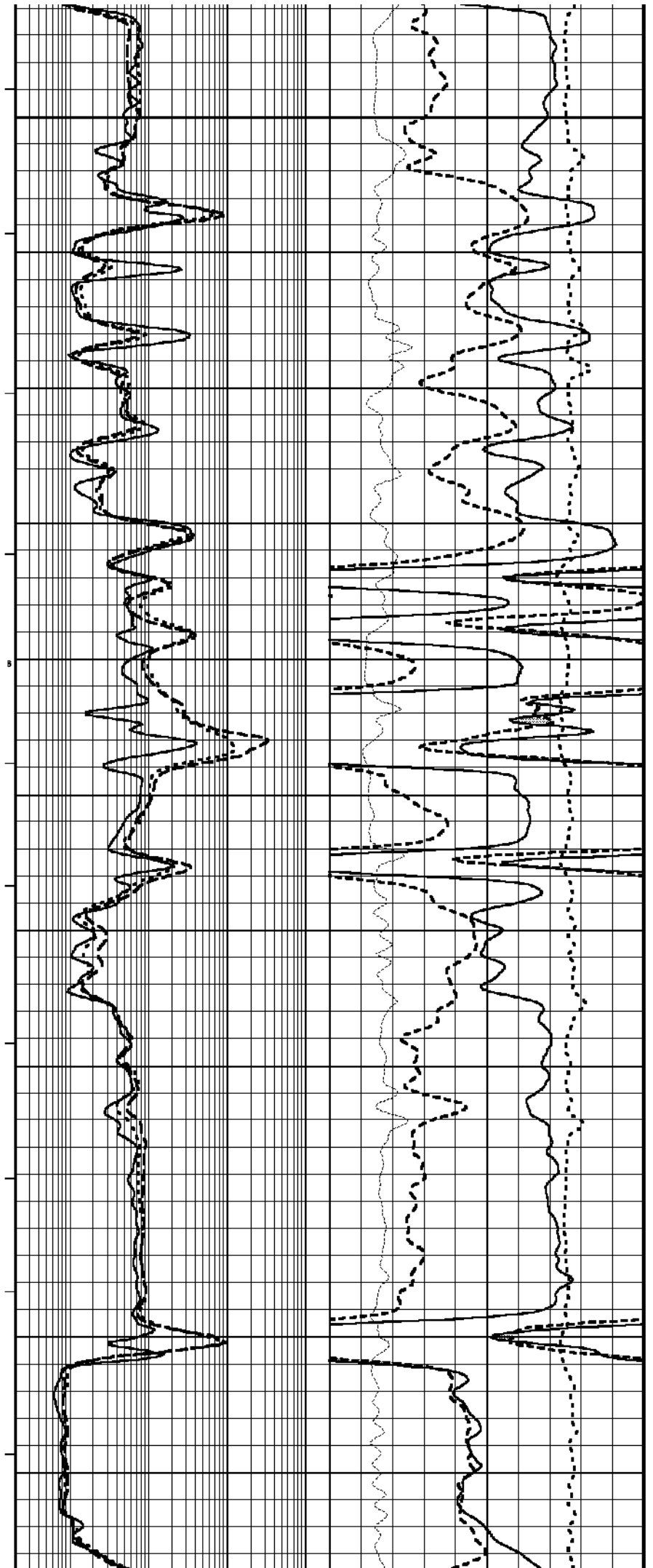
2240  
TVD

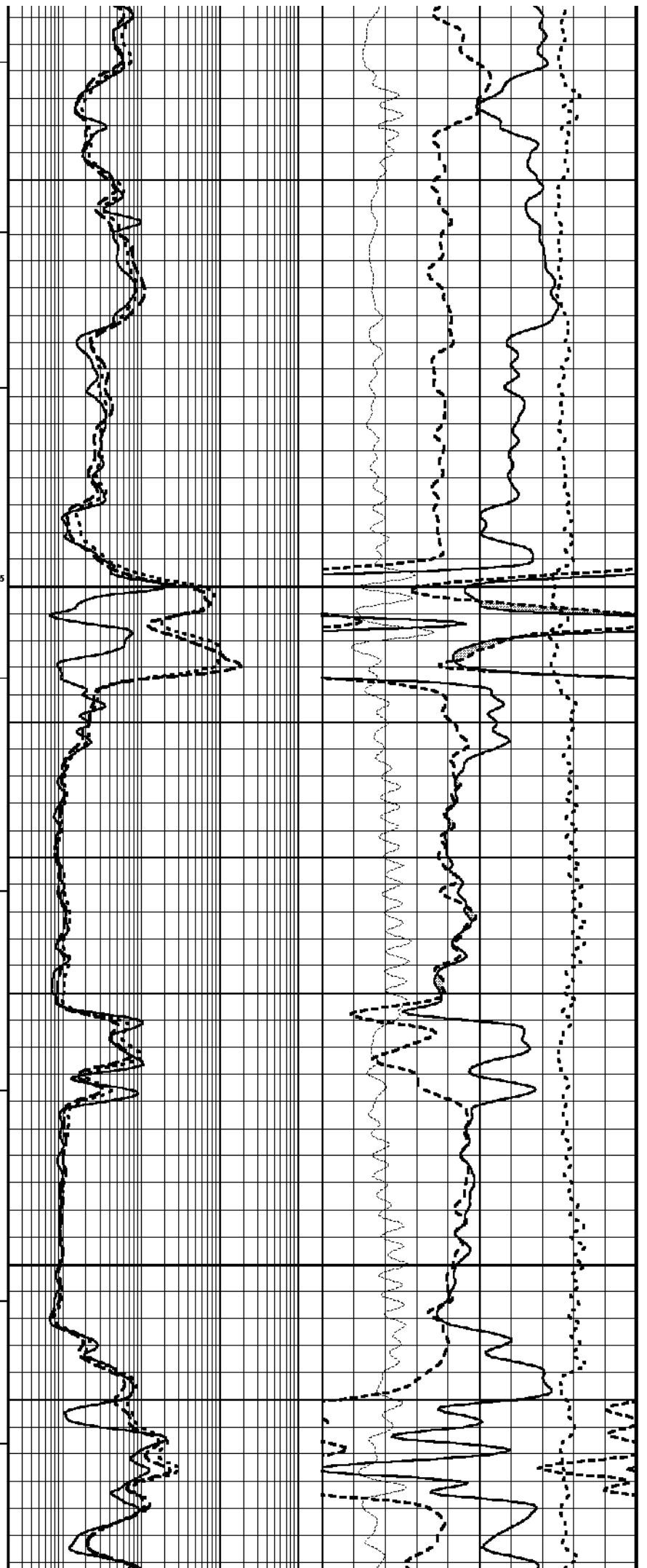
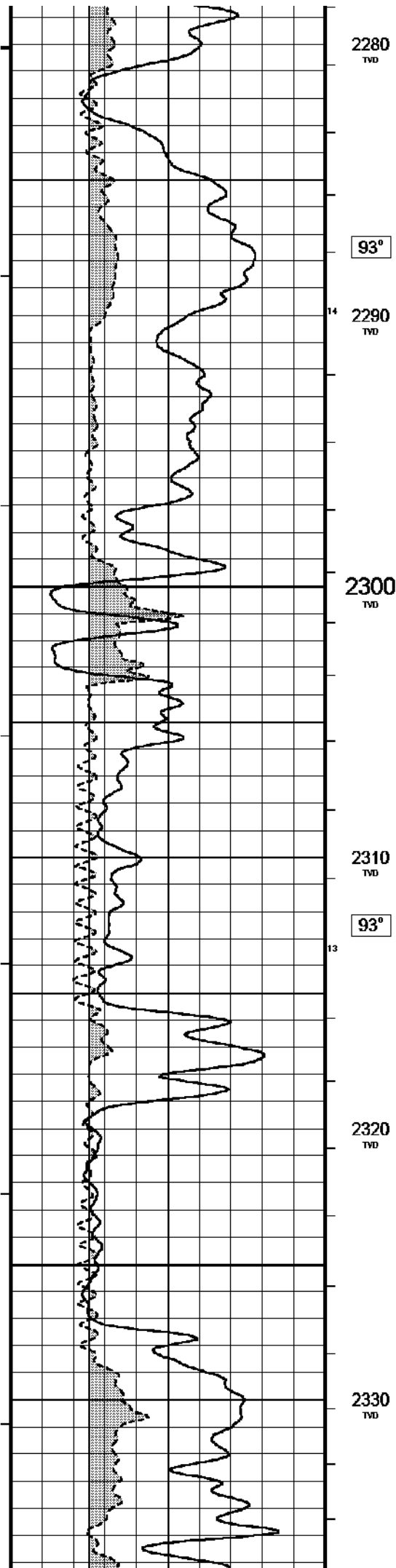
2250  
TVD

2260  
TVD

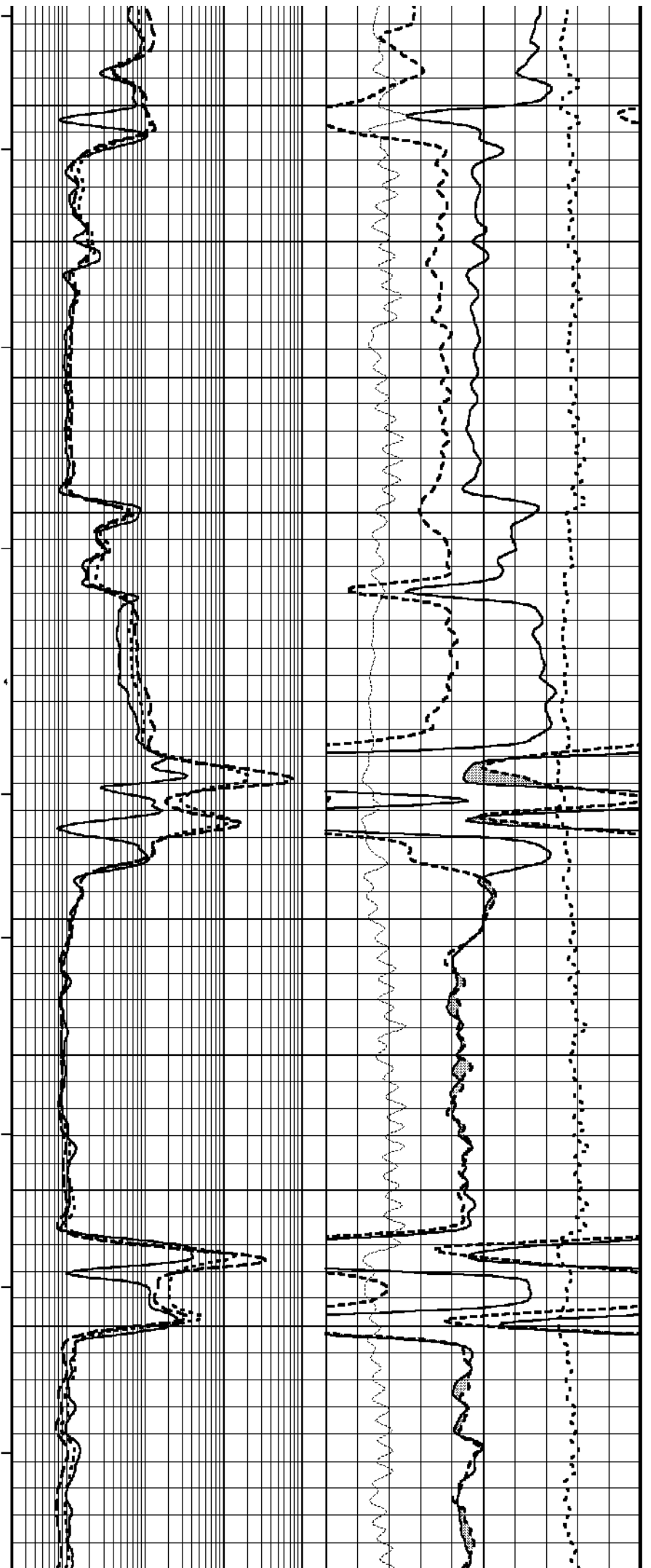
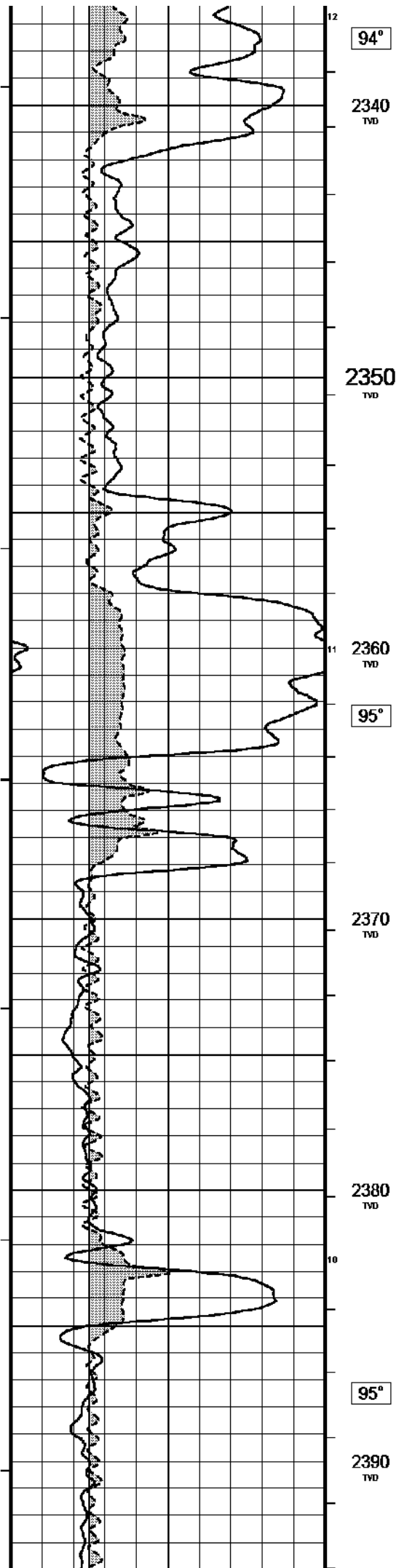
91°

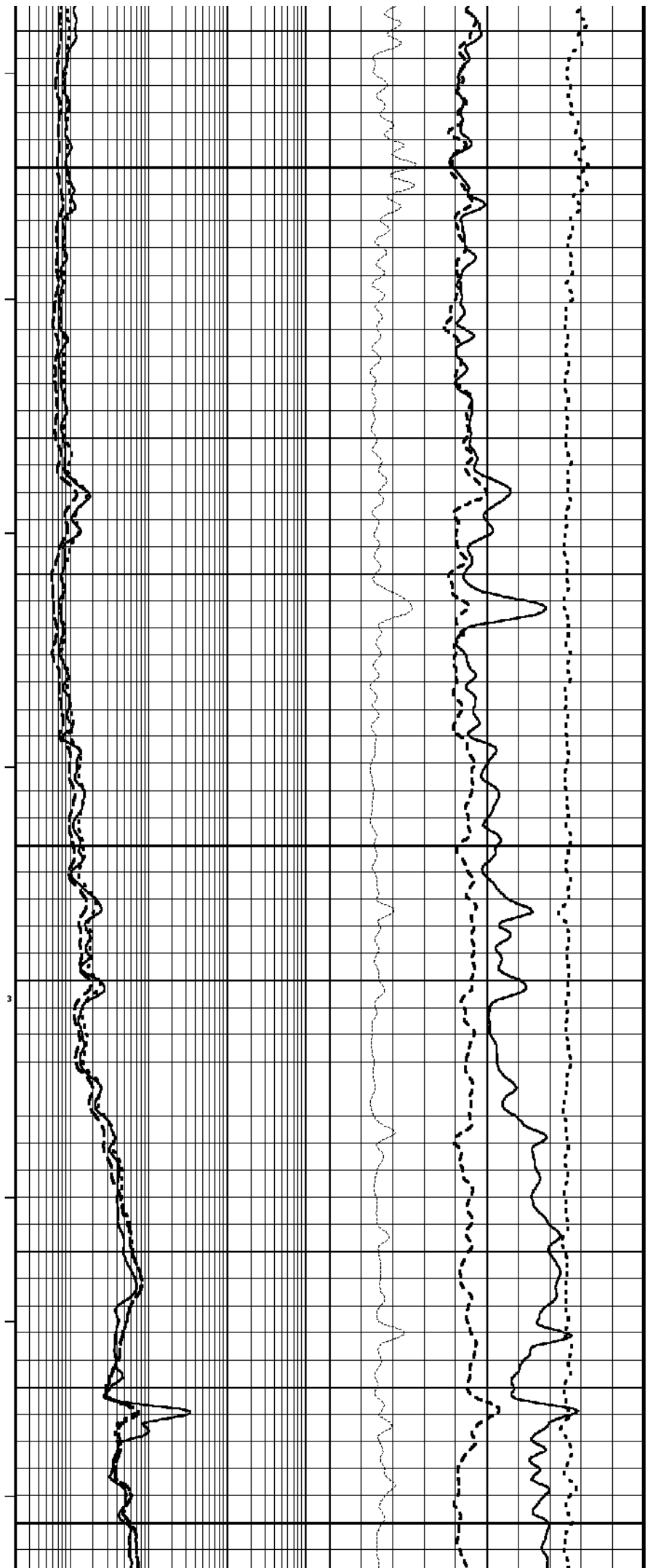
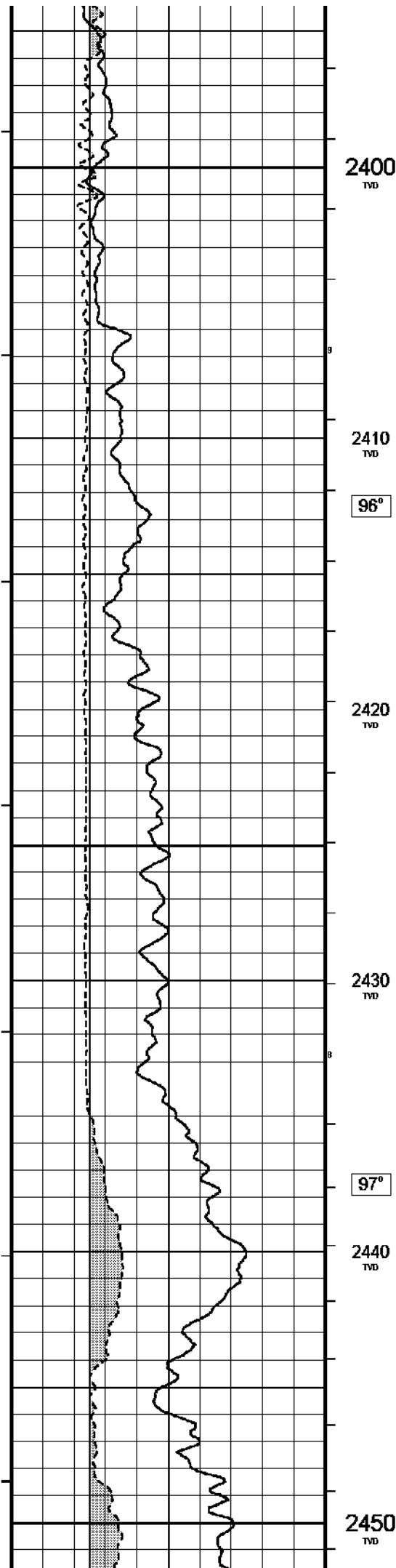
2270  
TVD

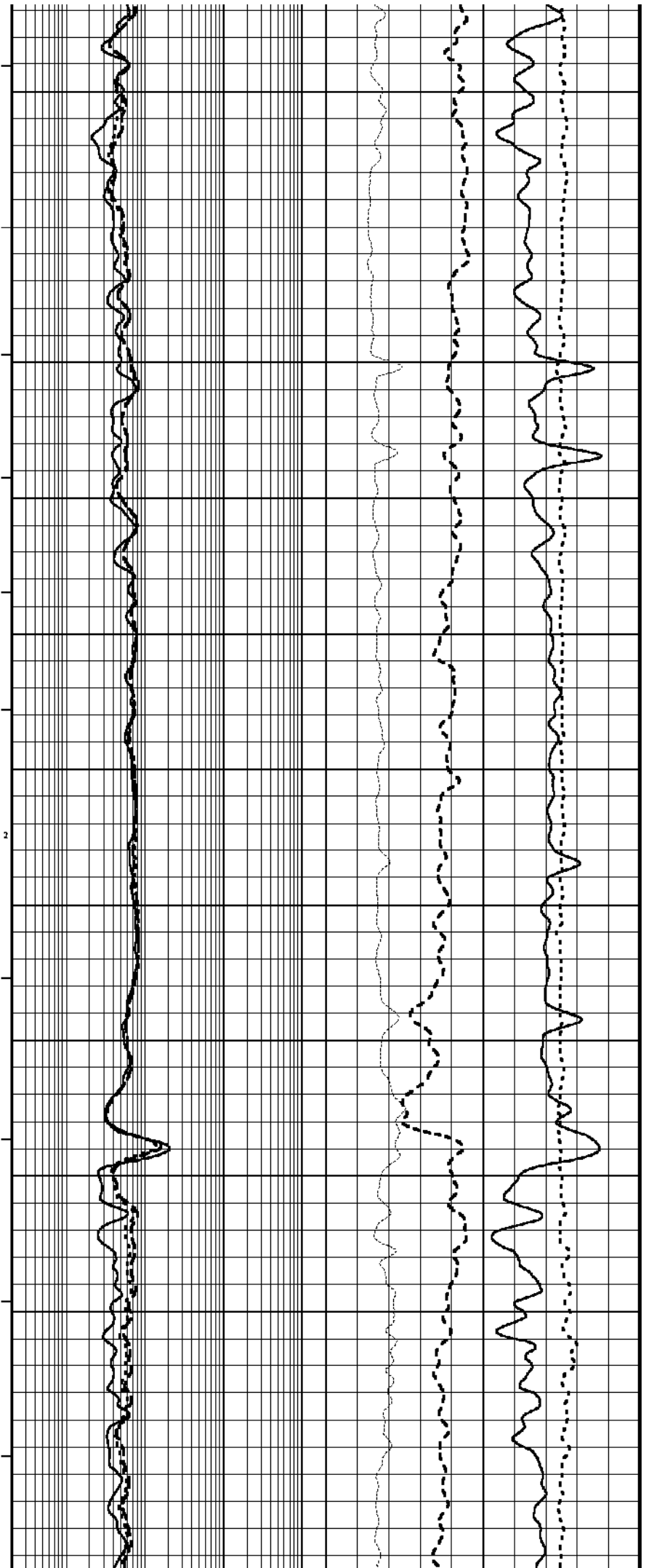
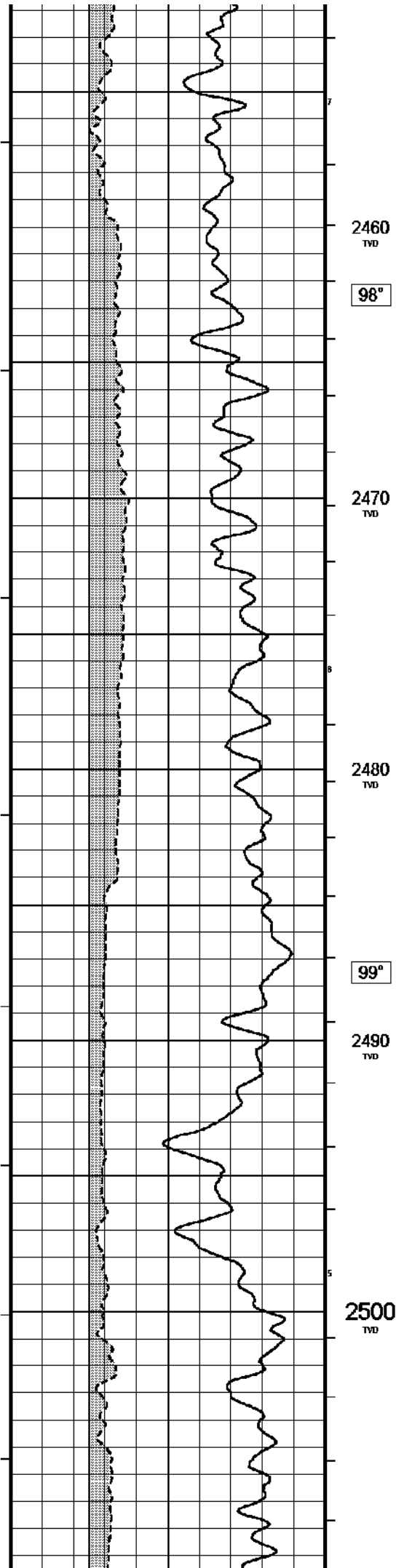


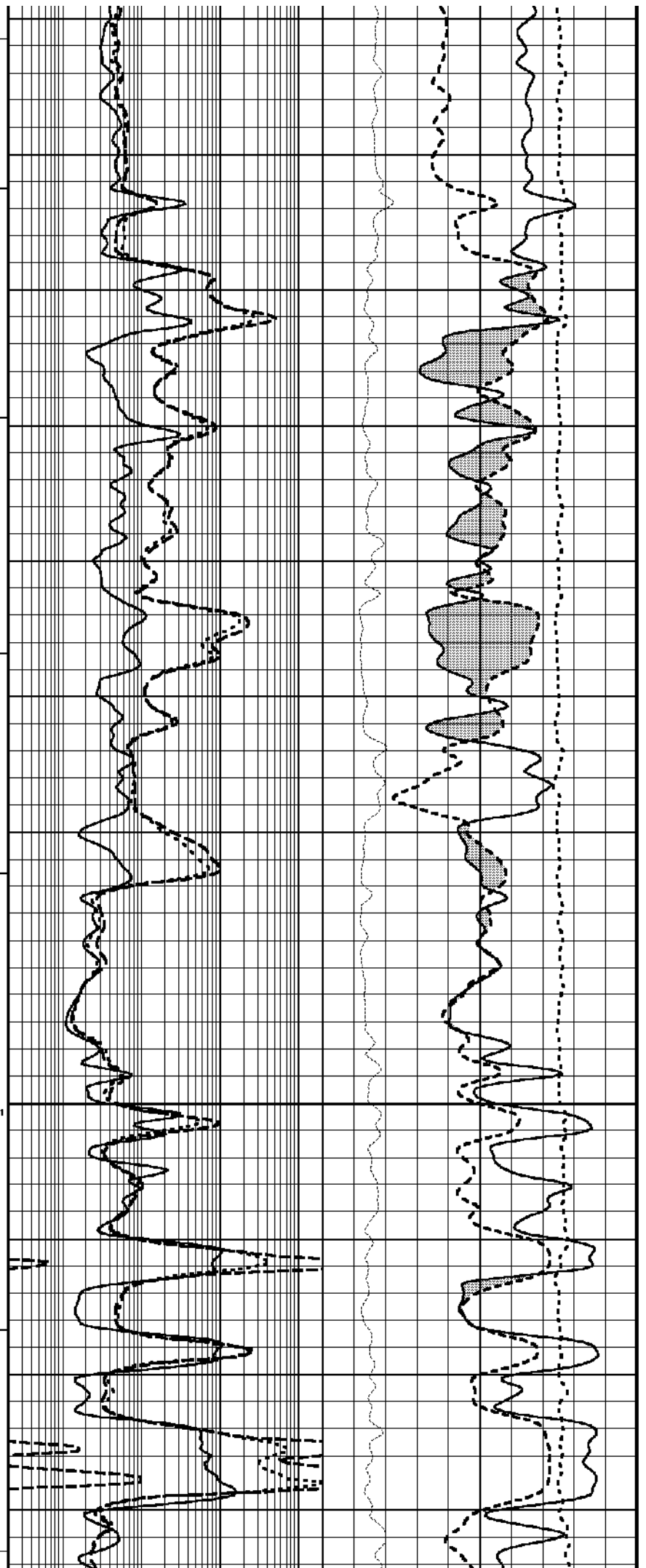
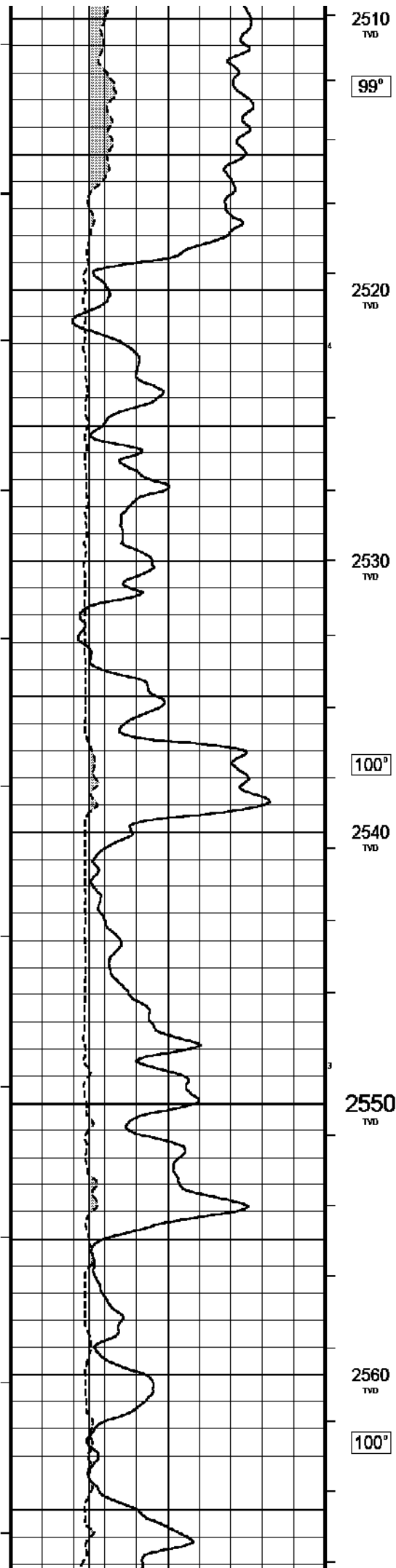


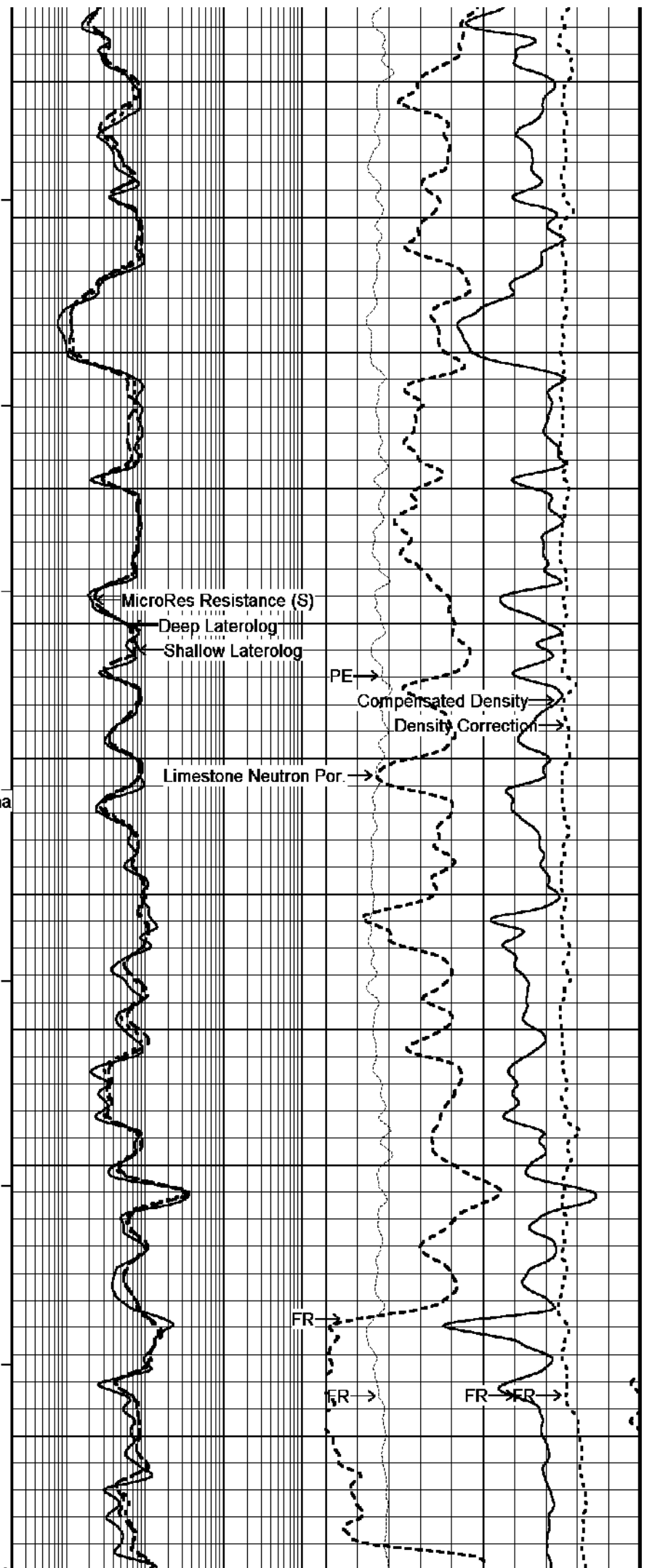
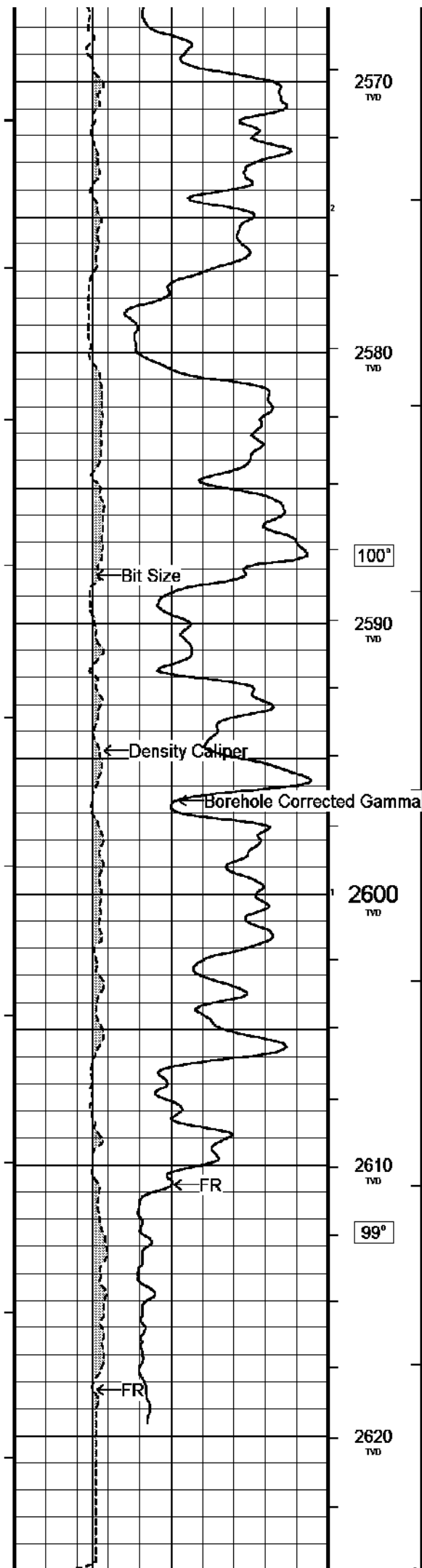


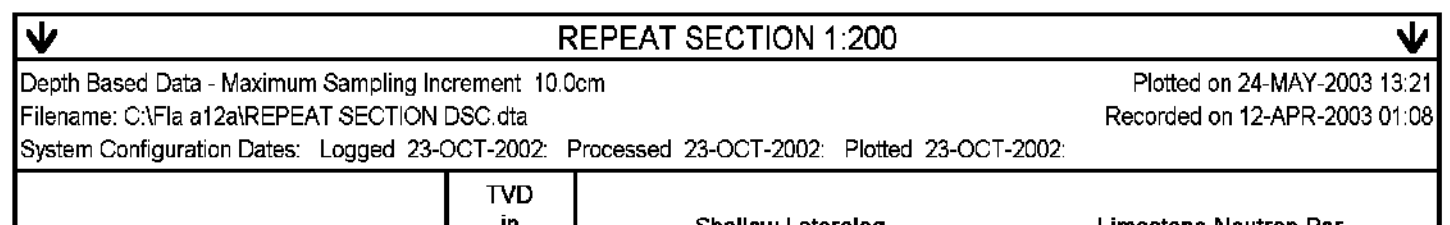
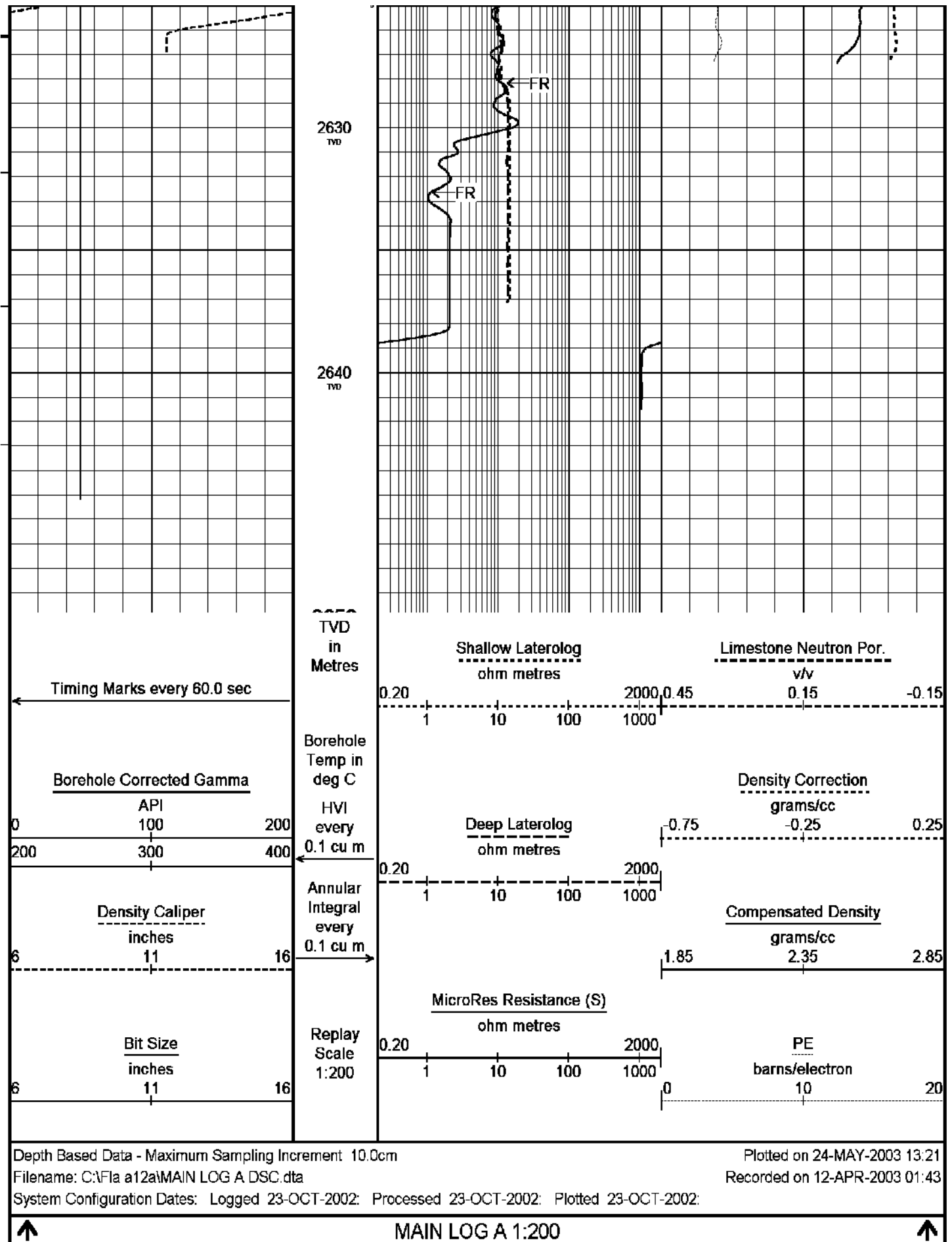




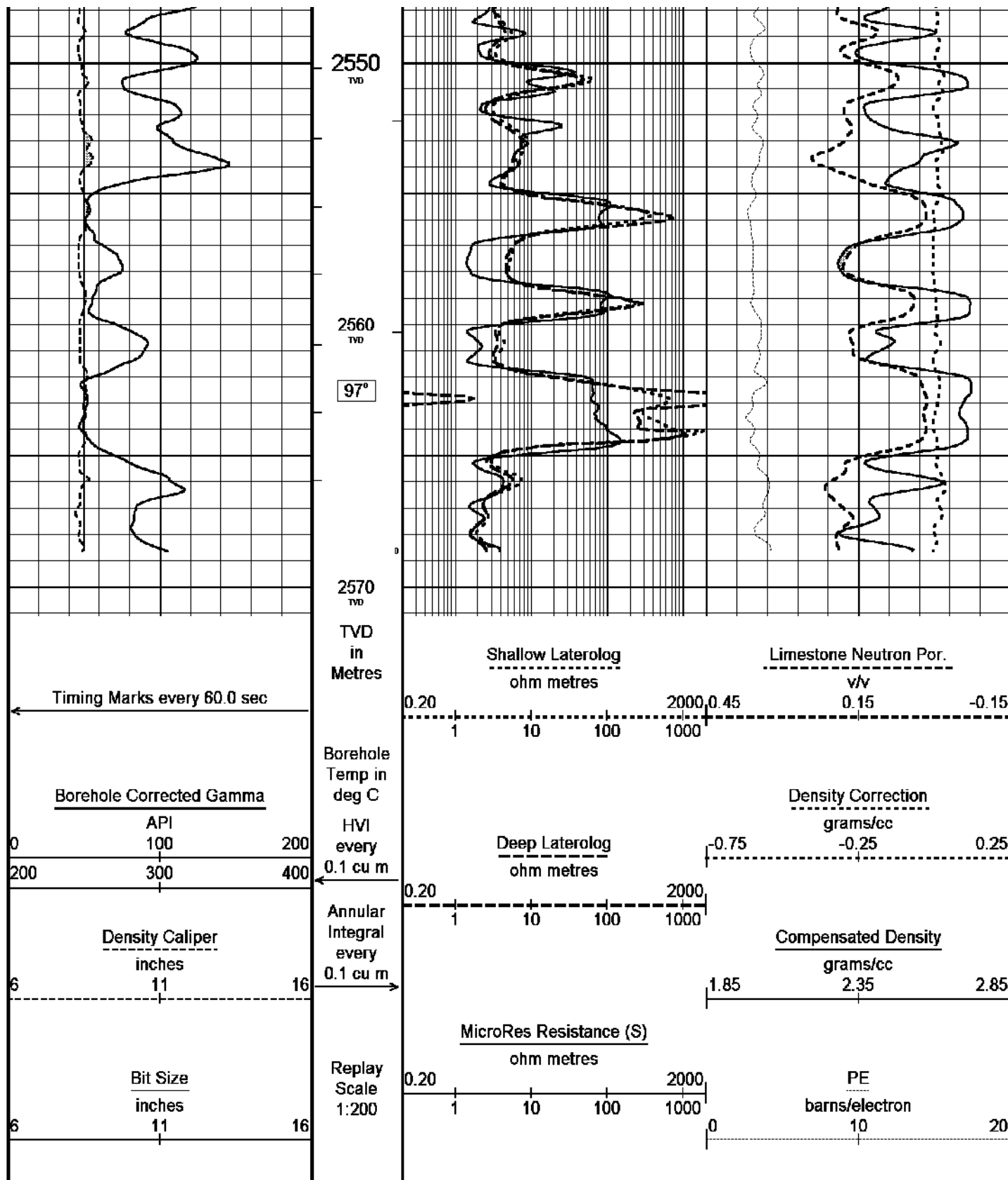












Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 24-MAY-2003 13:21

Filename: C:\Fla a12a\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\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		
Neutron Calibration MDN 069		Base Calibration on 17-JAN-2003 16:36 Field Check on 7-APR-2003 14:52	
Base Calibration			
	Measured		Calibrated (cps)
	Near	Far	Near Far
	2851	89	3714 110
Ratio	31.978		33.764
Field Calibrator at Base			
			Calibrated (cps)
			1871 2717
Ratio	0.689		
Field Check			
			Calibrated (cps)
			1846 2708
Ratio	0.682		
Neutron Constants MDN 069			
Neutron Source Id	724		
Neutron Jig Number	52		
Epithermal Neutron	No		
Caliper Source for Processing	Density Caliper		
Stand-off	0.00	inches	
Mud Density	1.19	gm/cc	
Limestone Sigma	7.10	cu	
Sandstone Sigma	4.26	cu	
Dolomite Sigma	4.70	cu	
Formation Pressure Source	Constant Value		
Formation Pressure	0.00	kpsi	
Temperature Source	MCG External Temperature		
Temperature	N/A	degrees C	
Mud Salinity	53.00	kppm	
Formation Fluid Salinity Source	None		
Formation Fluid Salinity	N/A	kppm	
Barite Mud Correction	Not Applied		
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

## Photo Density Calibration MPD 067

Base Calibration on 19-JAN-2003 12:40

Field Check on 7-APR-2003 14:40

## Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	58595	20350	53282	19349
Reference 2	27401	2638	25298	2555

## Field Check at Base

960.1 1164.2

## Field Check

957.7 1152.3

## PE Calibration

Base Calibration	WS	Measured		Calibrated Ratio
		WH	Ratio	
Background	180	835		
Reference 1	18645	58403	0.321	0.318
Reference 2	7313	27257	0.270	0.273

## Field Check at Base

179.8 835.5

## Field Check

180.1 831.6

## Density Constants MPD 067

Density Source Id	226
Nylon Calibrator Number	517
Aluminium/Fe Calibrator Number	517
Density Shoe Profile	4 inch
Caliper Source for Processing	Density Caliper
PE Correction to Density	Not Applied
Mud Density	1.19 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

## Laterolog Calibration MLE 015

Base Calibration on 7-APR-2003,15:42

Field Check on 12-APR-2003,01:32

## Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	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	
Groningen 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

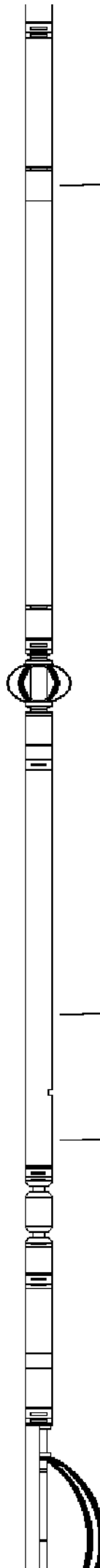
26.85 m    GGCE - Borehole Corrected Gamma

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

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

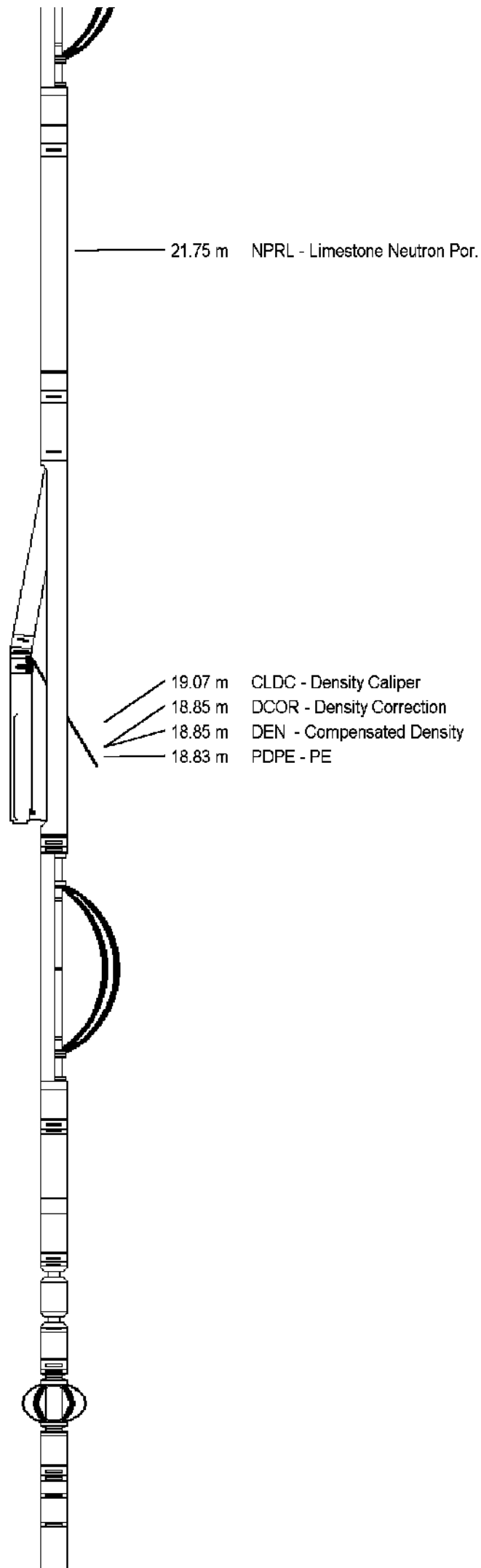
Compact Inline Bowspring A  
MIS 25    Length: 1.74 m    Weight: 33.07 lb

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

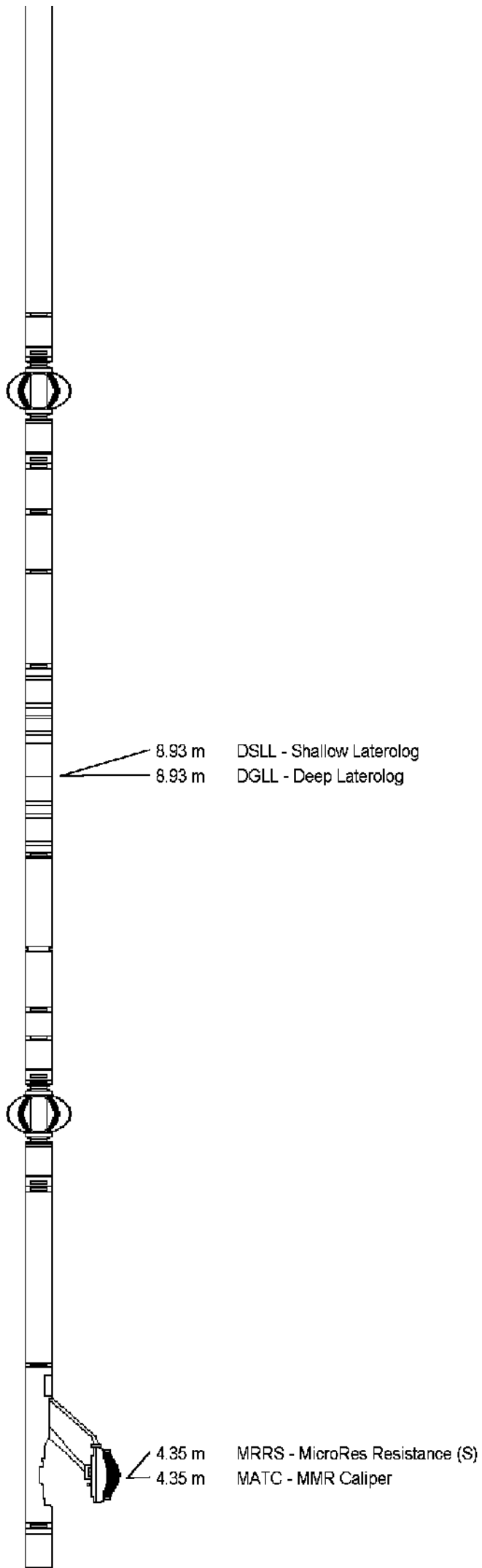


Compact Inline Standoff B  
MIS 49    Length: 0.65 m    Weight: 15.43 lb

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

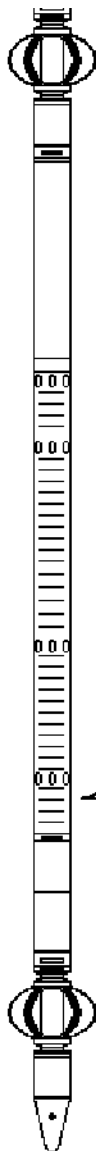
Compact Inline Standoff B  
MIS 76    Length: 0.65 m    Weight: 15.43 lb

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



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



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 - GR  
DENSITY - NEUTRON  
1:200 TVD