



PRECISION

Compact

**DUAL LATEROLOG - GR
DENSITY - NEUTRON**

1:200 TVD

COMPANY **ESSO AUSTRALIA PTY.LTD**

WELL **WKF W23A**

FIELD **KINGFISH GDA94**

PROVINCE/COUNTRY **BASS STRAIT, VICTORIA**

COUNTRY/STATE **AUSTRALIA**

LOCATION **S 38 35 34.842, E 148 6 19.670**

N 5727806.411 m, E 596271.358 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 DF @ 33.43m above Permanent Datum

Drilling Measured From DF

Elevations:
KB 33.43 metres
DF 33.43 metres
GL -76.13 metres

Date	24-OCT-2006	
Run Number	ONE	
Depth Driller	2382.04	metres
Depth Logger	2382.04	metres
First Reading	2370.80	metres
Last Reading	618.90	metres
Casing Driller	618.90	metres
Casing Logger	618.90	metres
Bit Size	8.50	inches
Hole Fluid Type	KCOL/PHPA	
Density / Viscosity	1.17 g/cc	27.00 CP
PH / Fluid Loss	9.00	2.40 ml/30Min
Sample Source	FLOWLINE	
Rm @ Measured Temp	0.145 @ 25.0	ohm-m
Rmf @ Measured Temp	0.088 @ 25.0	ohm-m
Rmc @ Measured Temp	0.195 @ 25.0	ohm-m
Source Rmf / Rmc	MEAS	MEAS
Rm @ BHT	0.065 @ 83.1	ohm-m
Time Since Circulation	29 HOURS	
Max Recorded Temp	87.70	deg C
Equipment Name	CML	
Equipment / Base	1	SALE
Recorded By	B J R MOSS, R L TENCH	
Witnessed By	D VAN DER AA	
LAST CIRC.	17:05 22/10	Last Line

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	651.00	3338.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	10.750	0.00	651.00	40.50

REMARKS

RIG: NABORS 453

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

FIELD FINAL LOGS TO BE CORRELATED TO ANADRILL GAMMA LOG.

MAX. TEMPERATURE: 87.7 DEG C AT 3281.0 m MD
MAX. INCLINATION: 60.76 DEG AT 1340.34 m MD
MAX. DOGLEG SEVERITY: 6.96 DEG/30m AT 679.90 m MD
DEPLOYMENT ANGLE: 47.36 DEG

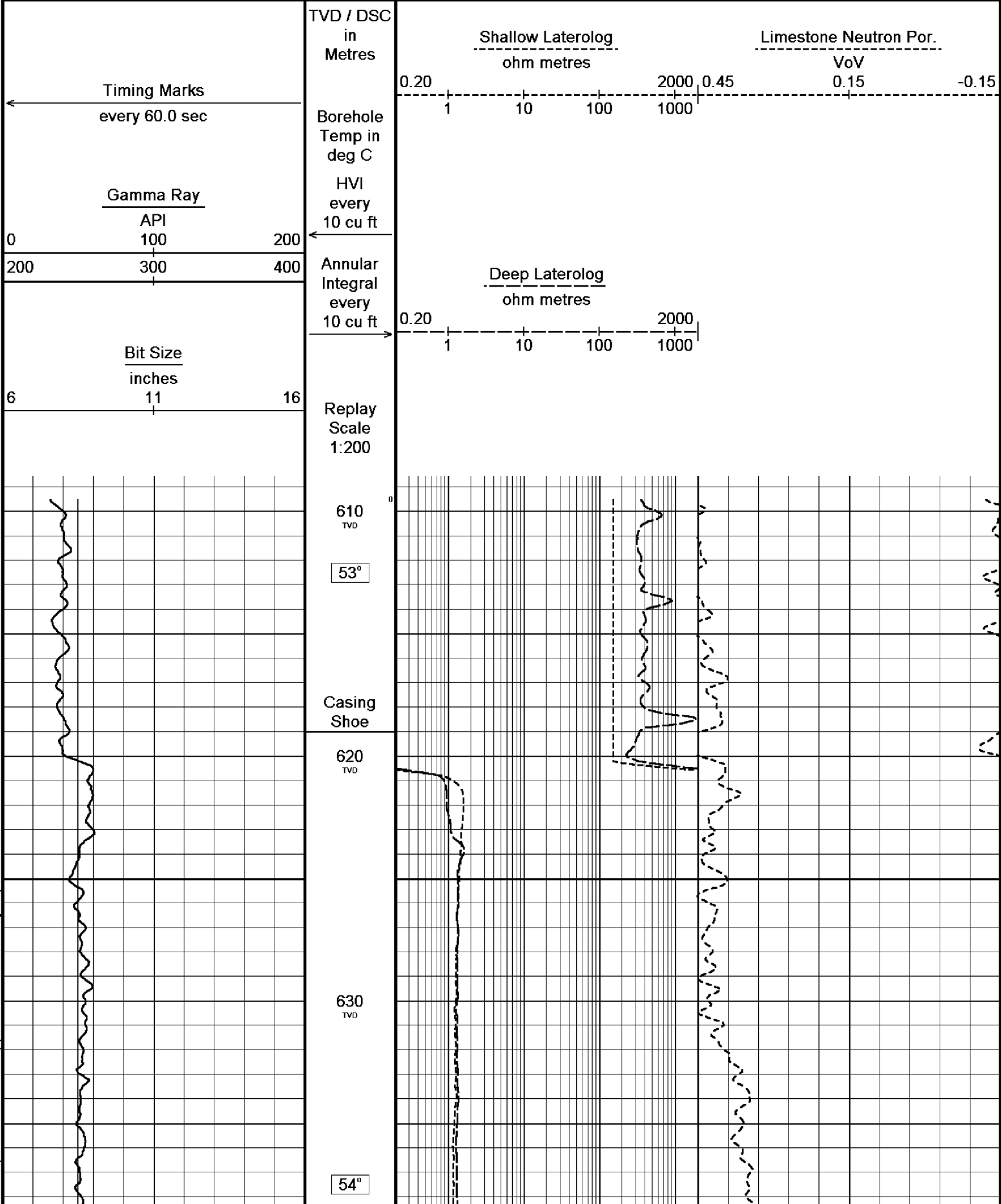
HVOL: FT^3
AVOL: FT^3
NO HOLE VOLUMES OR DENSITY READINGS GIVEN DUE TO FAILURE OF CALIPER AND DENSITY TOOL DURING RUNNING IN THE HOLE.

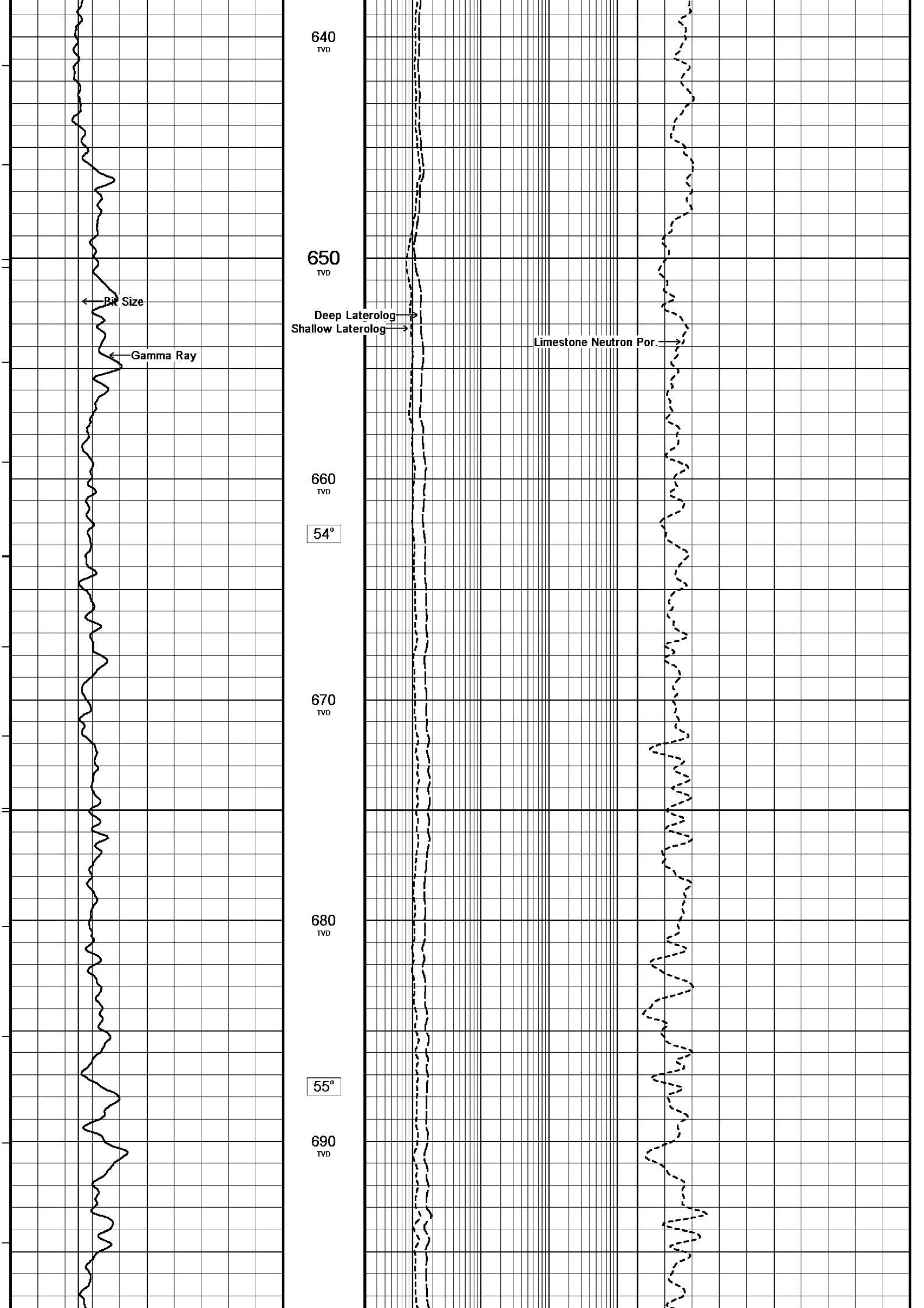
LOGGING SPEED 6 M/MIN FROM TD TO 2995 M MD
LOGGING SPEED 12 M/MIN FROM 2995 TO 1444 M MD
LOGGING SPEED 6 M/MIN FROM 1444 TO 1272 M MD
LOGGING SPEED 12 M/MIN FROM 1272 TO 1071 M MD
LOGGING SPEED 6 M/MIN FROM 1071 TO 928 M MD

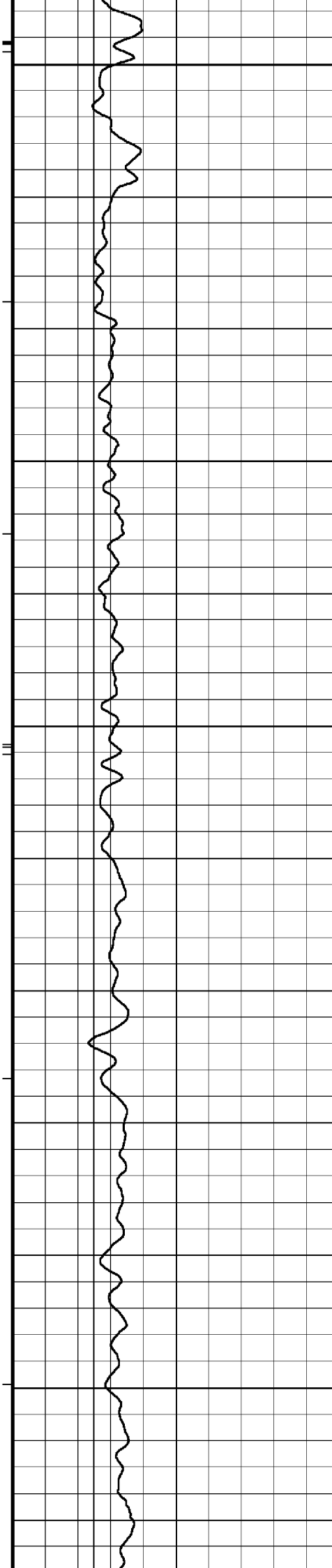
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, 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 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 25-OCT-2006 07:59
 Filename: C:\logs\WKF_W23A\FIELD_DATA\WKF_W23A_MAIN_LOG.dta Recorded on 24-OCT-2006 11:22
 System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:







700
TVD

710
TVD

55°

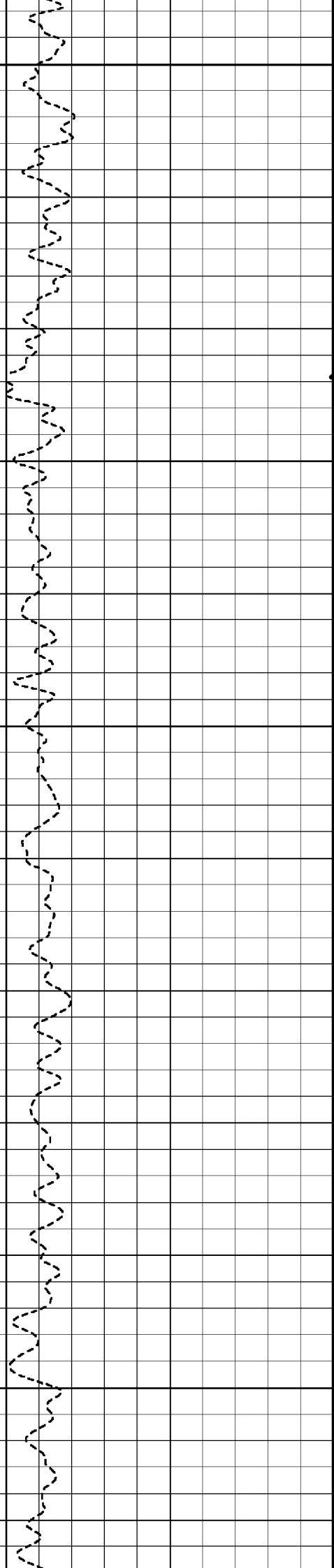
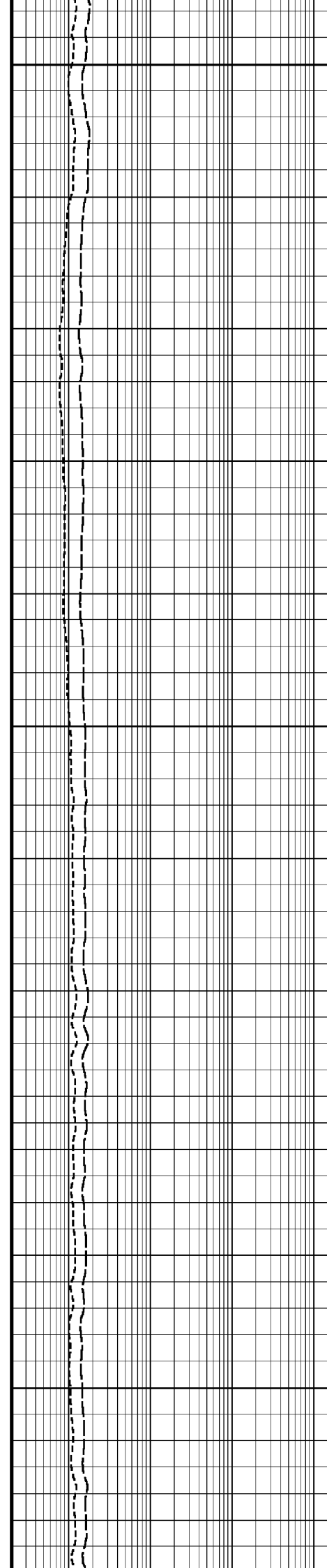
720
TVD

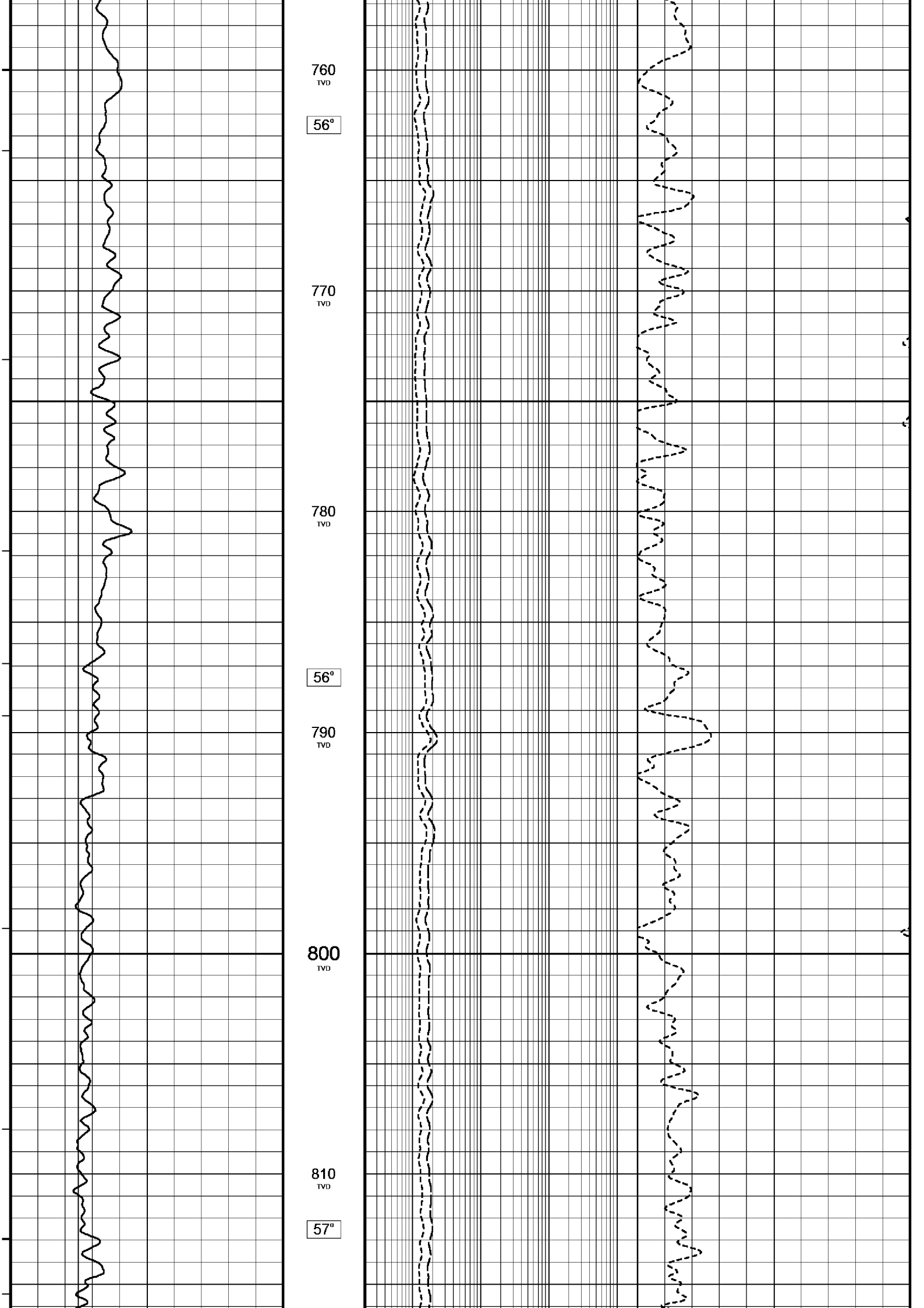
730
TVD

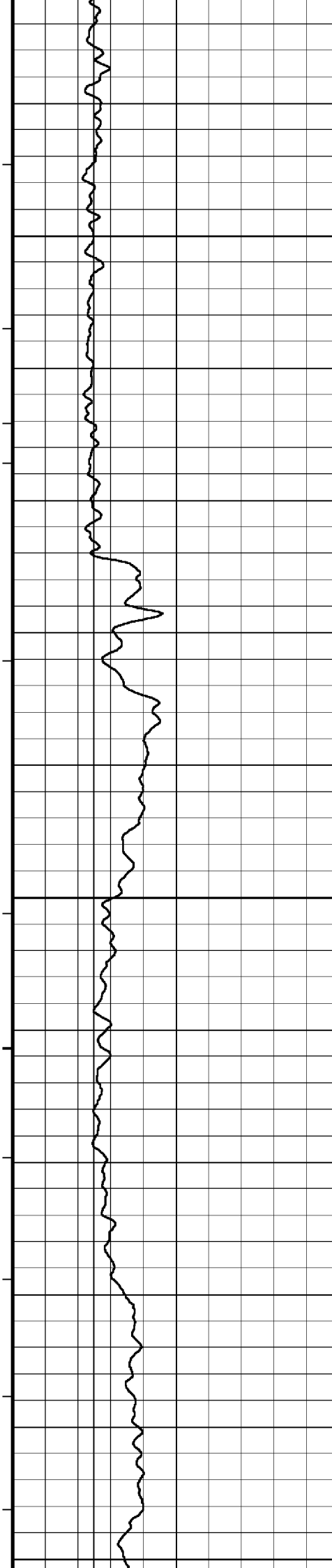
55°

740
TVD

750
TVD







820
TVD

830
TVD

57°

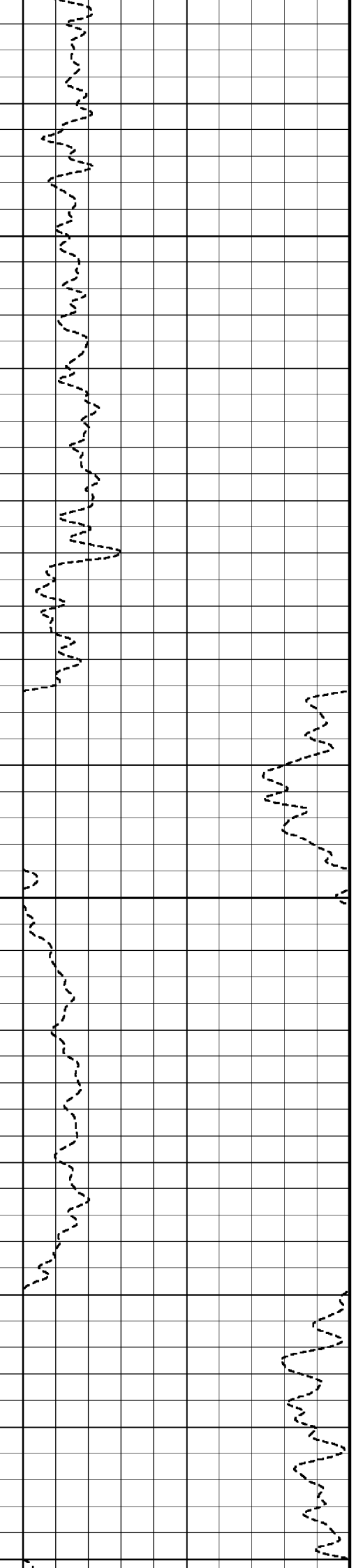
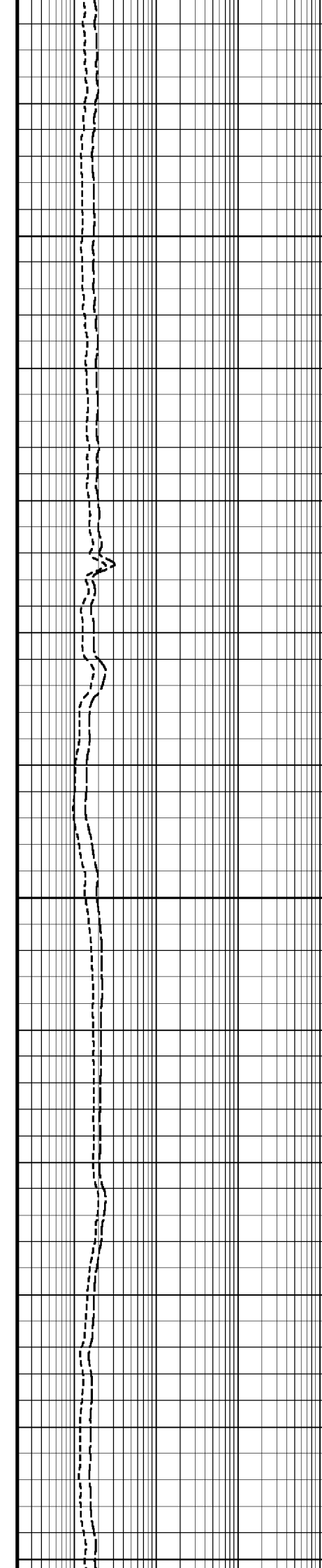
840
TVD

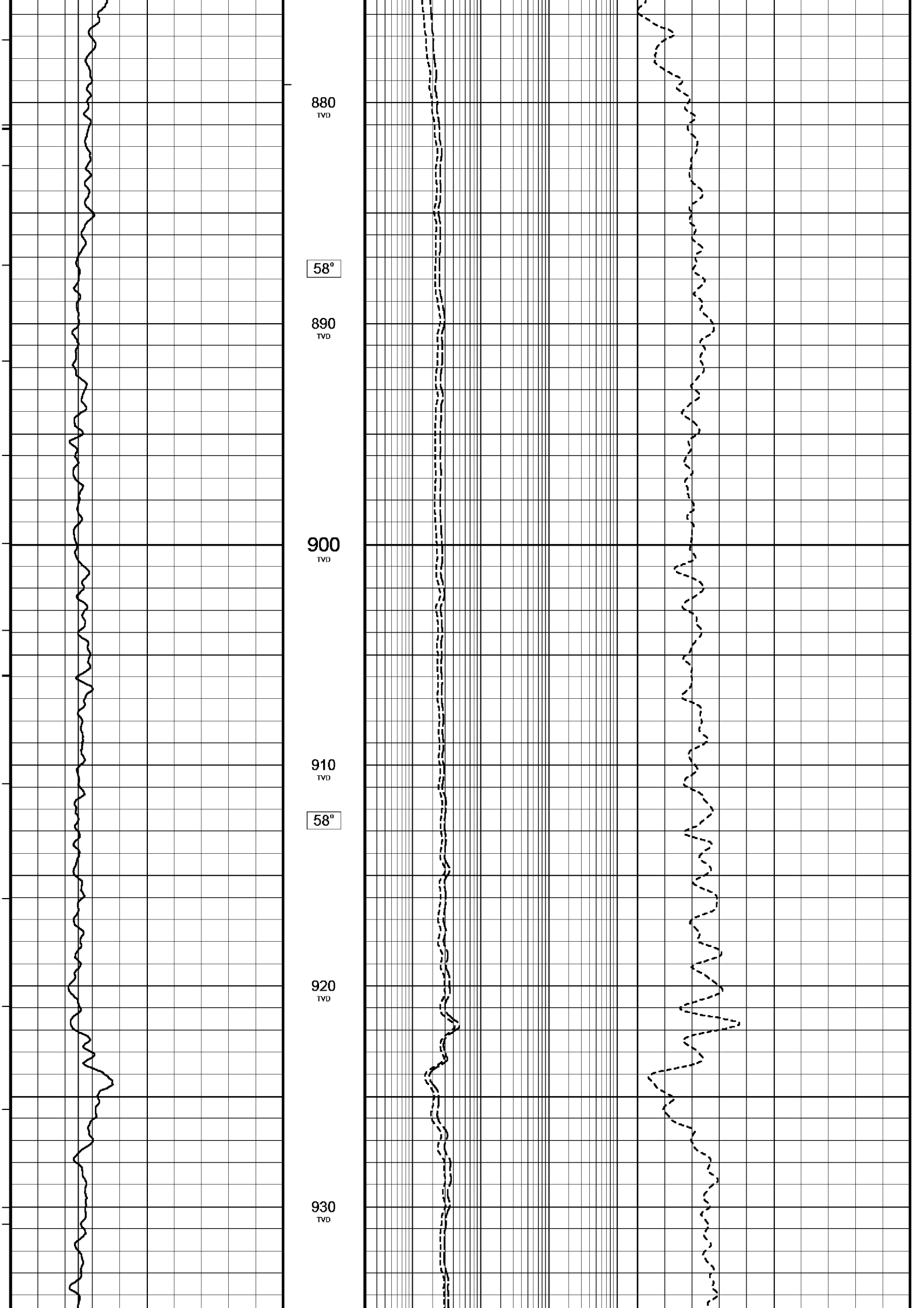
850
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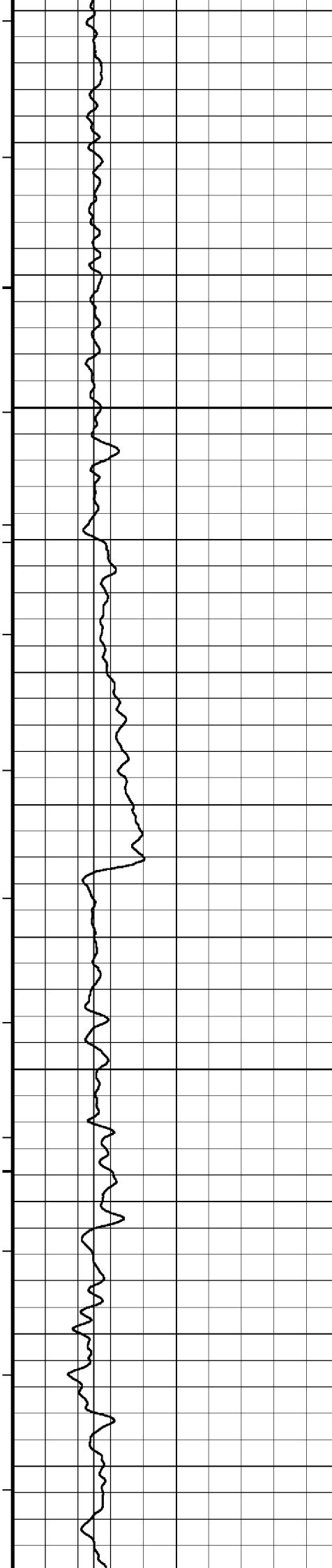
860
TVD

57°

870
TVD







58°

940
TVD

950
TVD

960
TVD

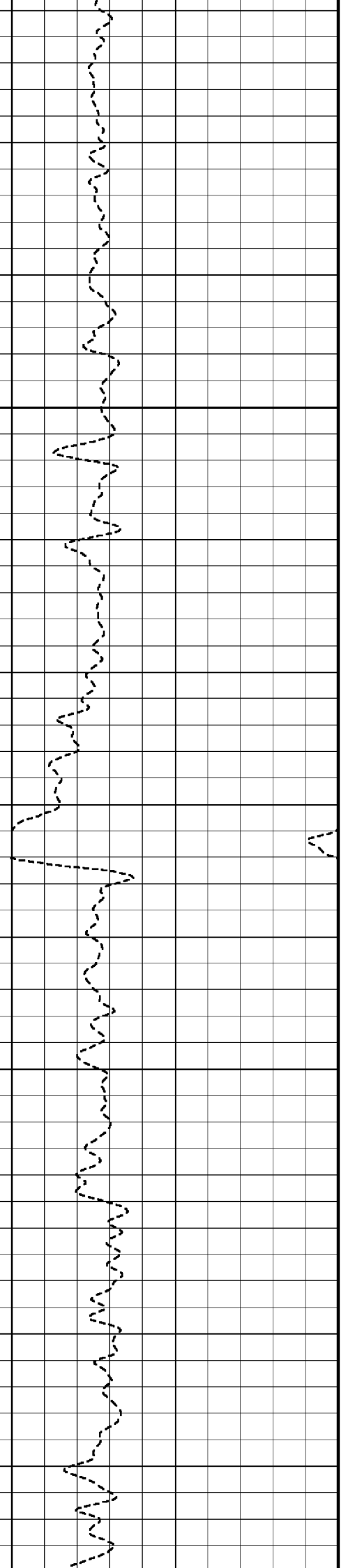
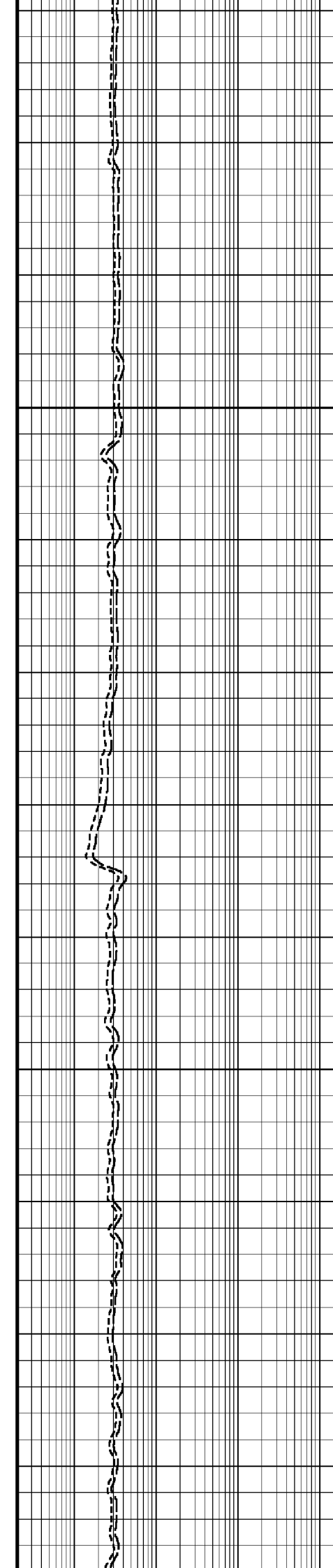
59°

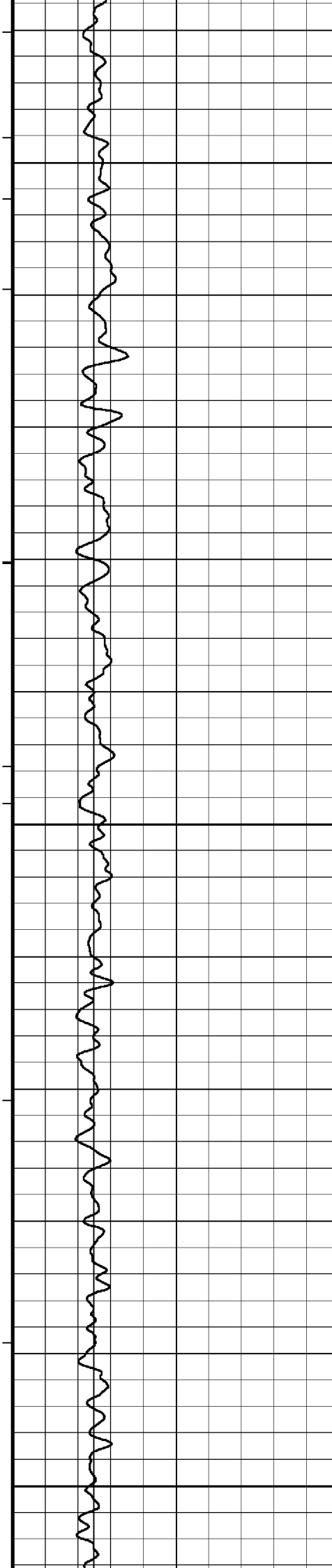
970
TVD

980
TVD

59°

990
TVD





1000
TVD

1010
TVD

60°

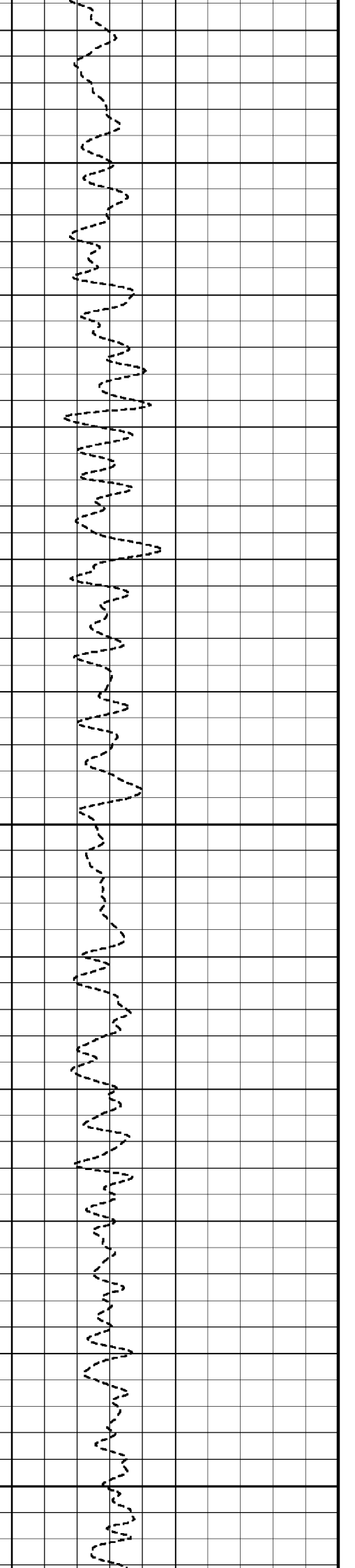
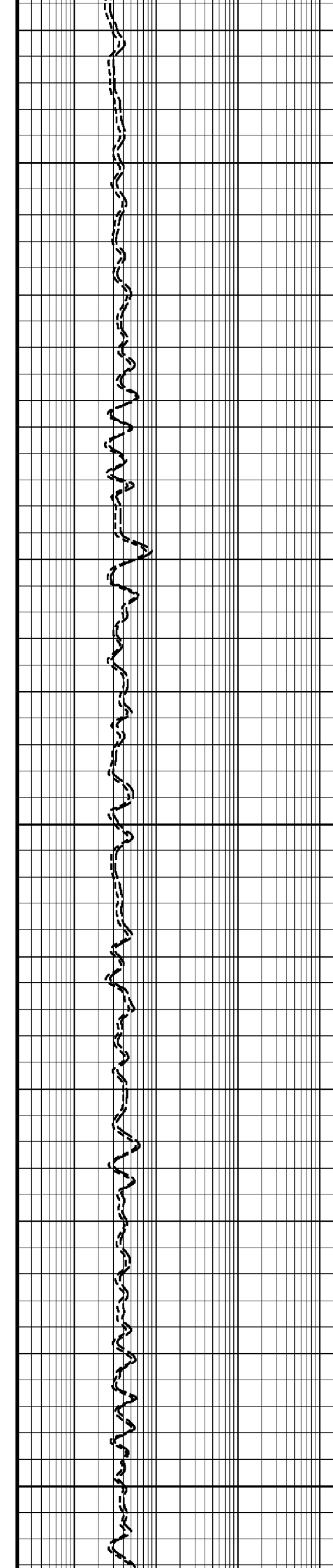
1020
TVD

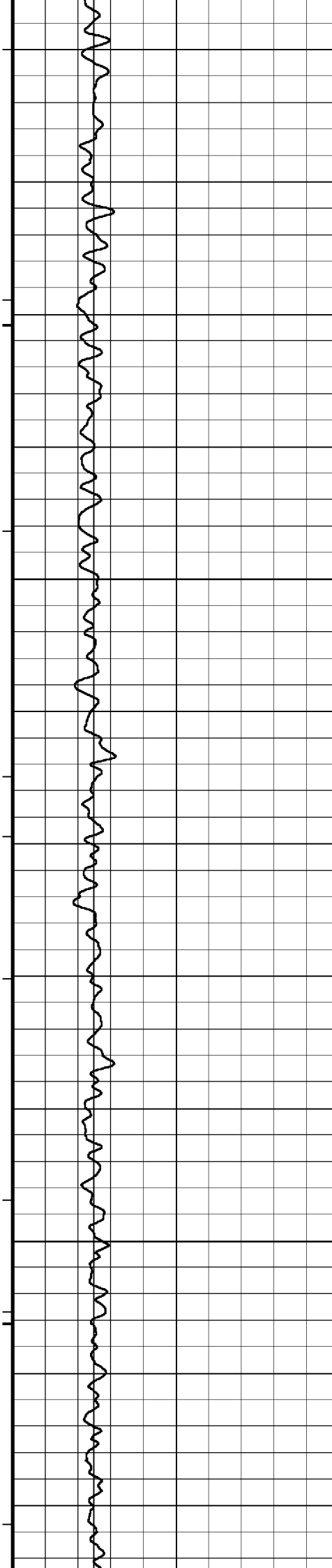
1030
TVD

60°

1040
TVD

1050
TVD





1060
TVD

61°

1070
TVD

1080
TVD

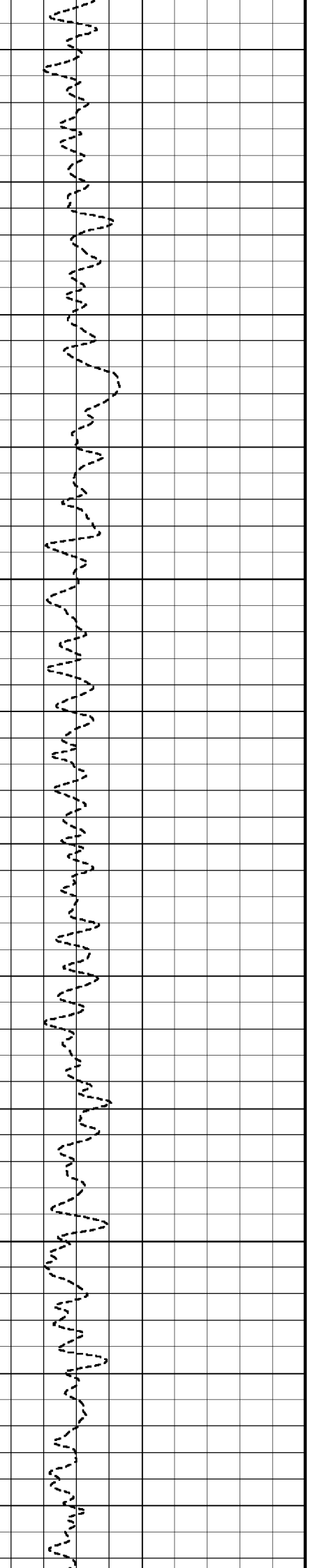
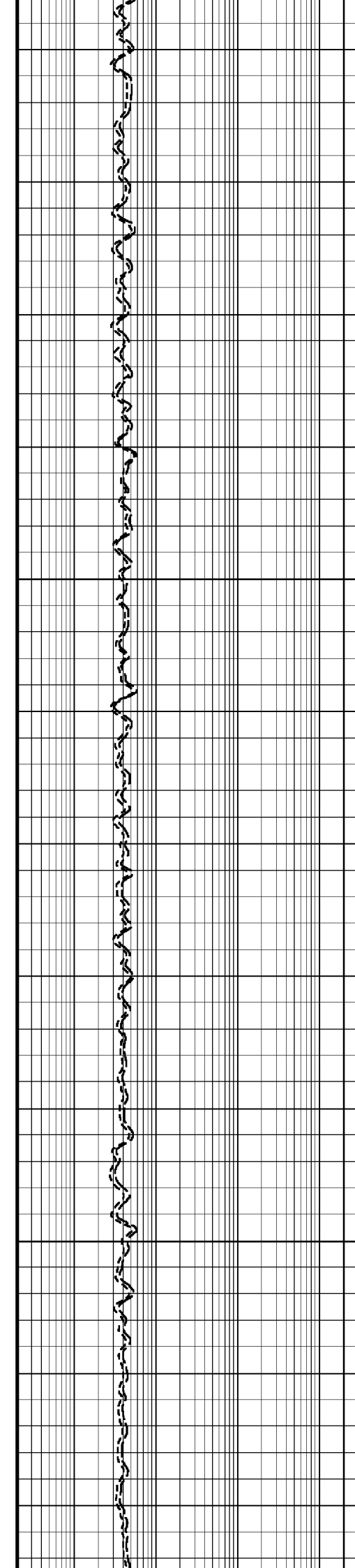
62°

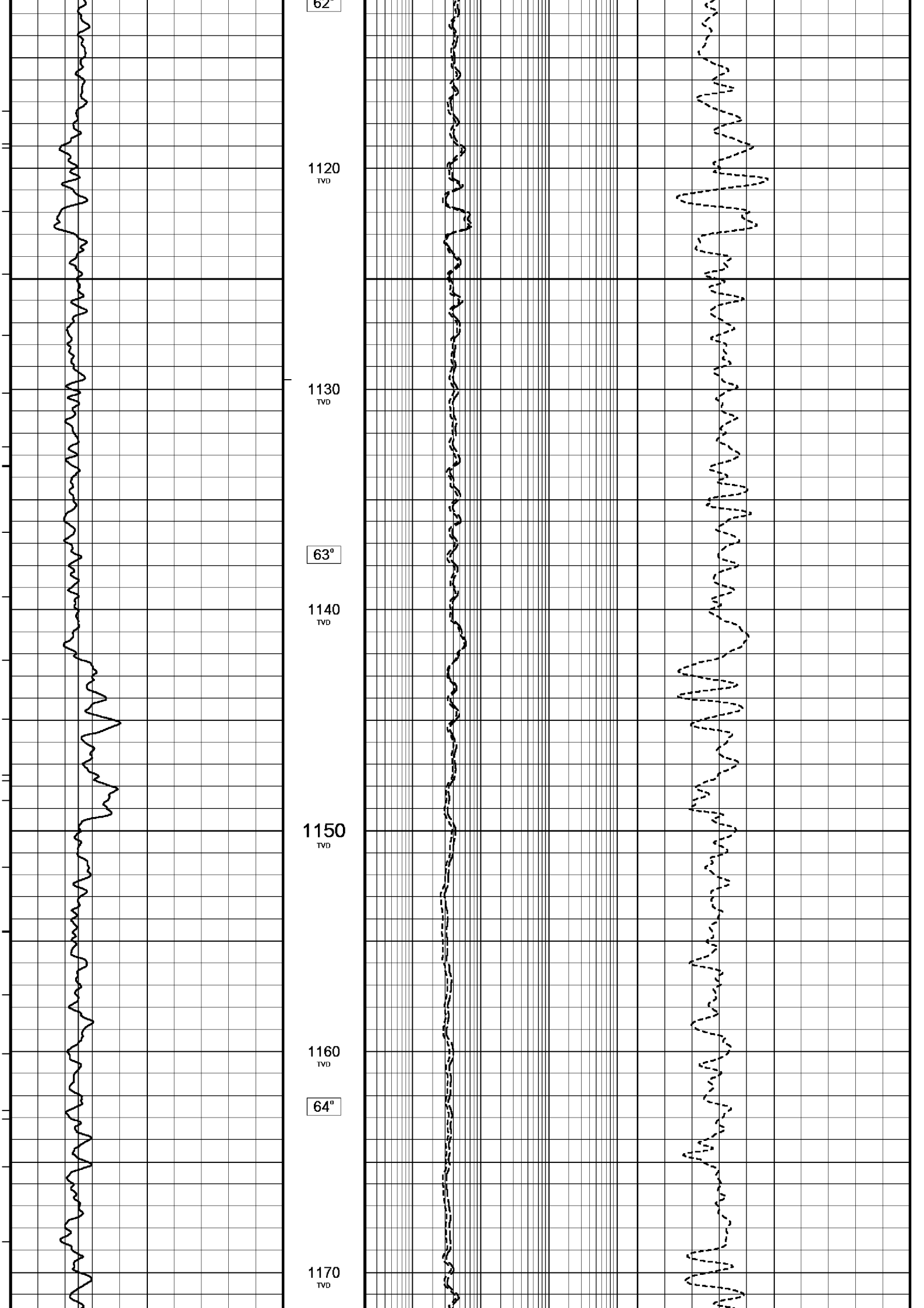
1090
TVD

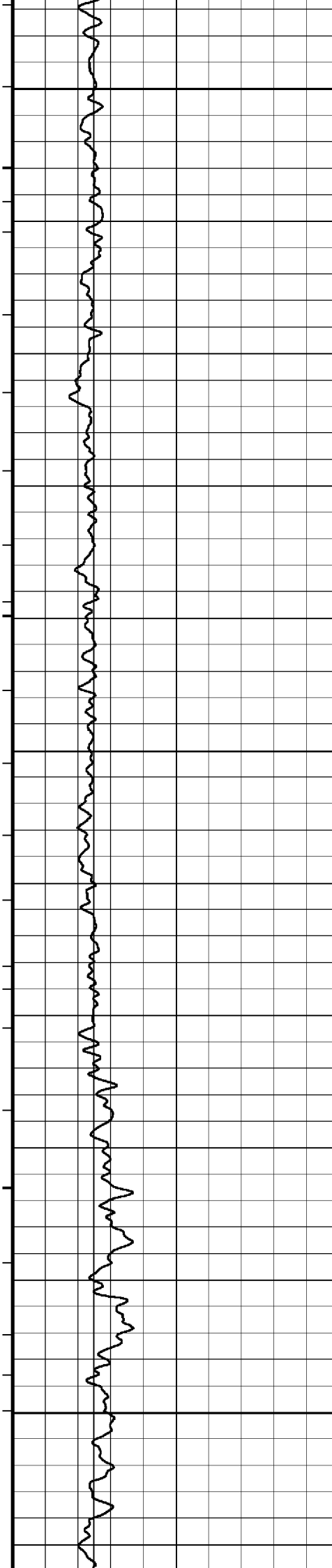
1100
TVD

1110
TVD

63°







1180
TVD

64°

1190
TVD

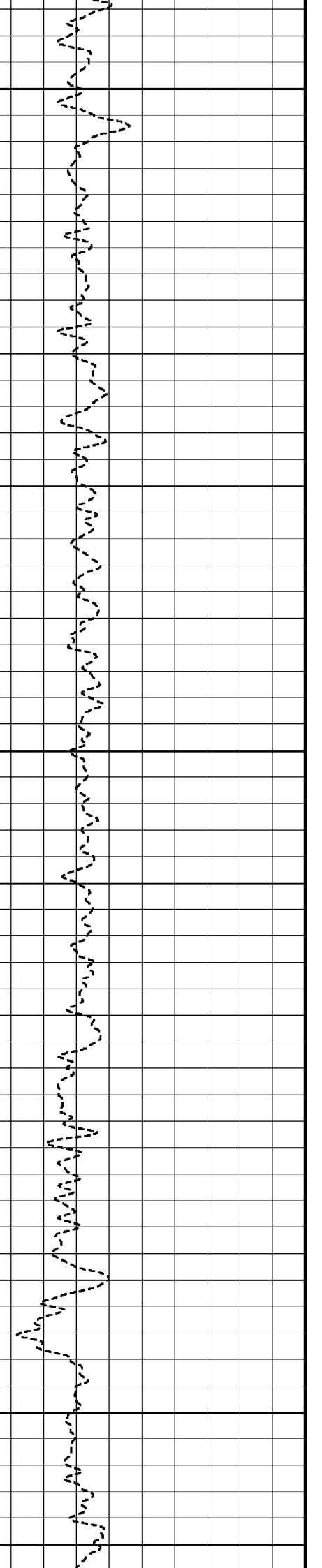
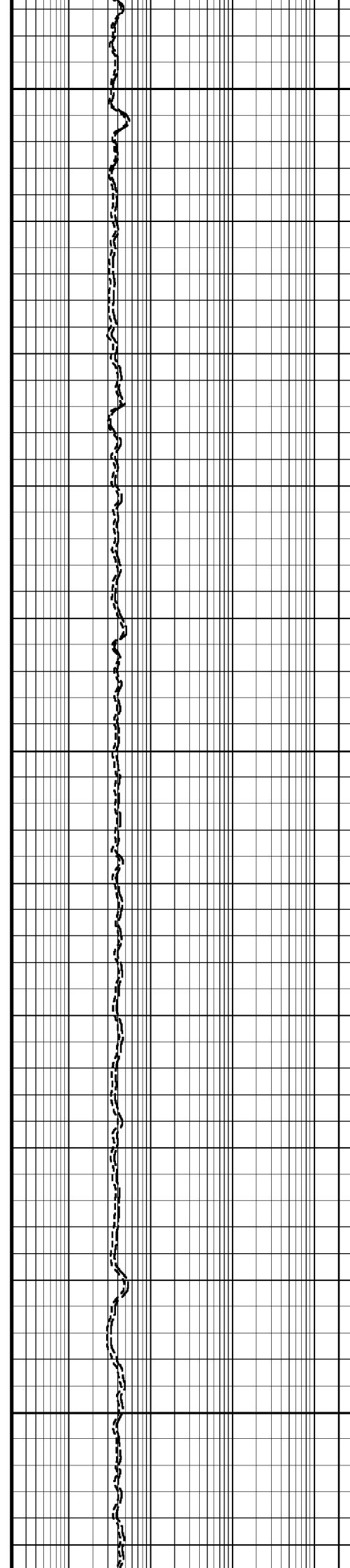
1200
TVD

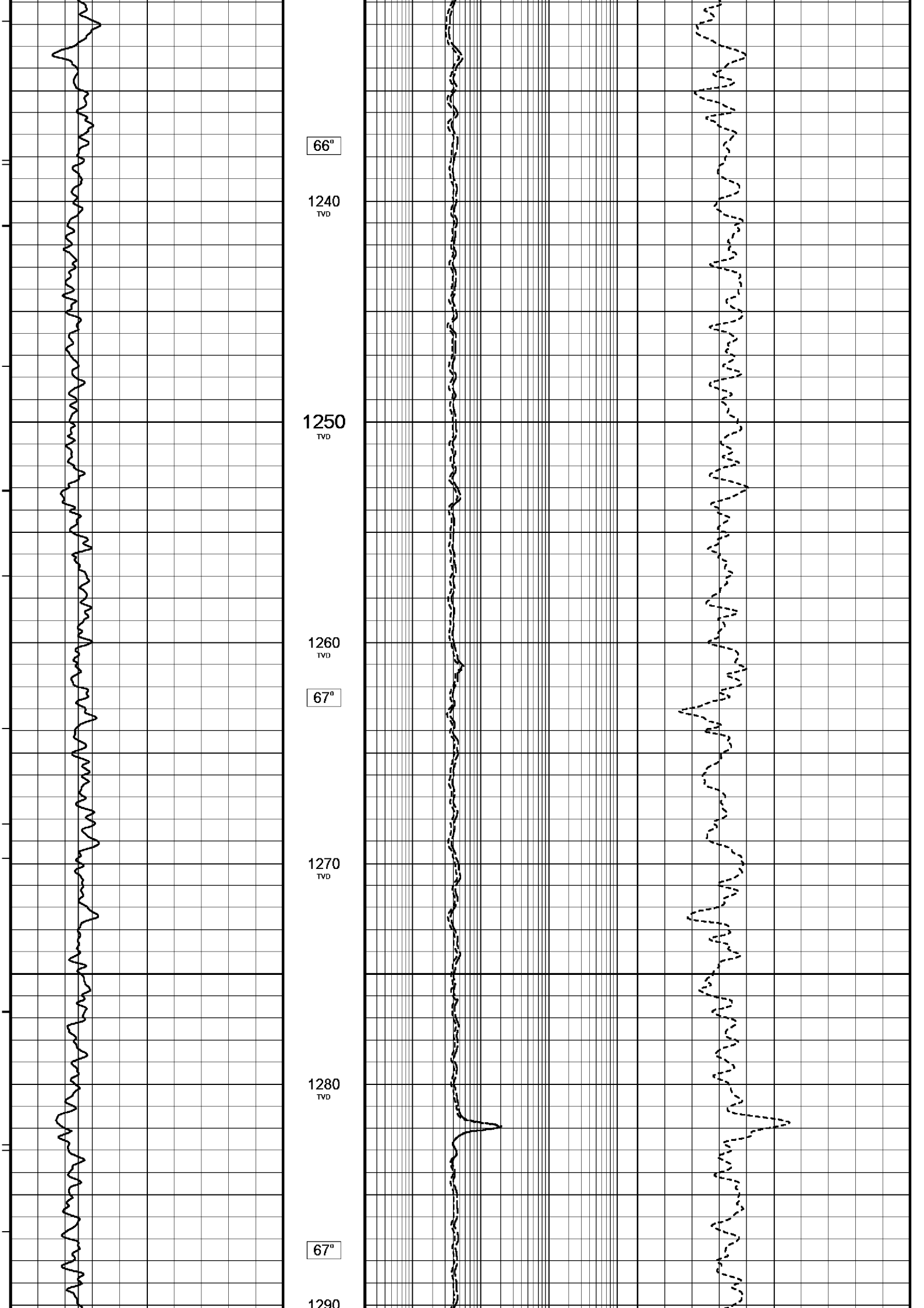
1210
TVD

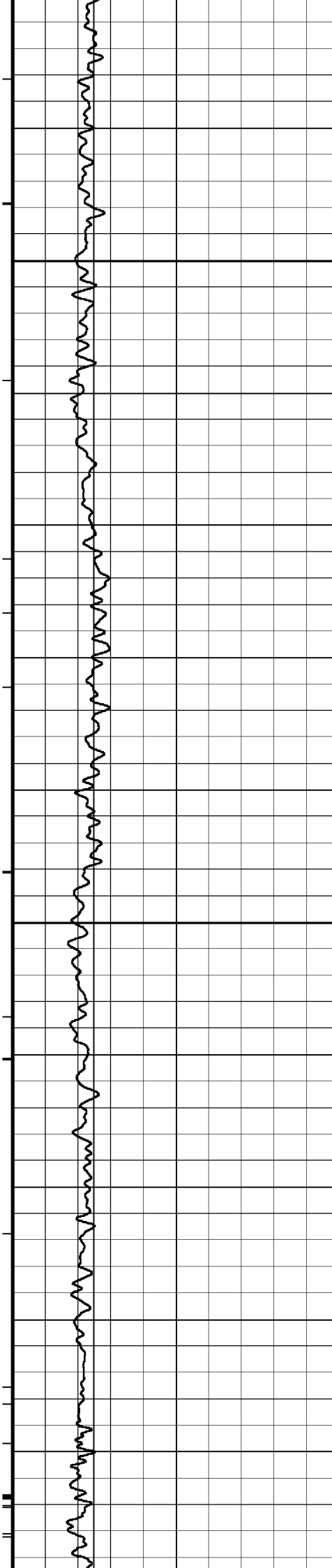
65°

1220
TVD

1230
TVD







1300
TVD

1300
TVD

1310
TVD

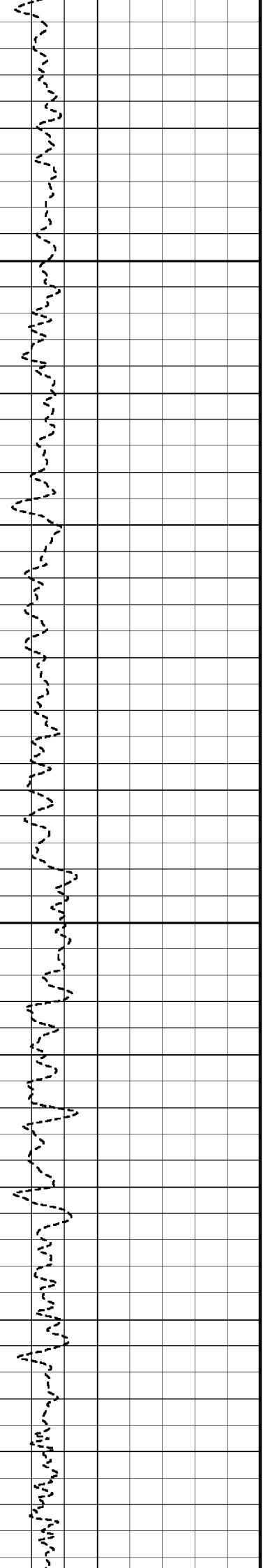
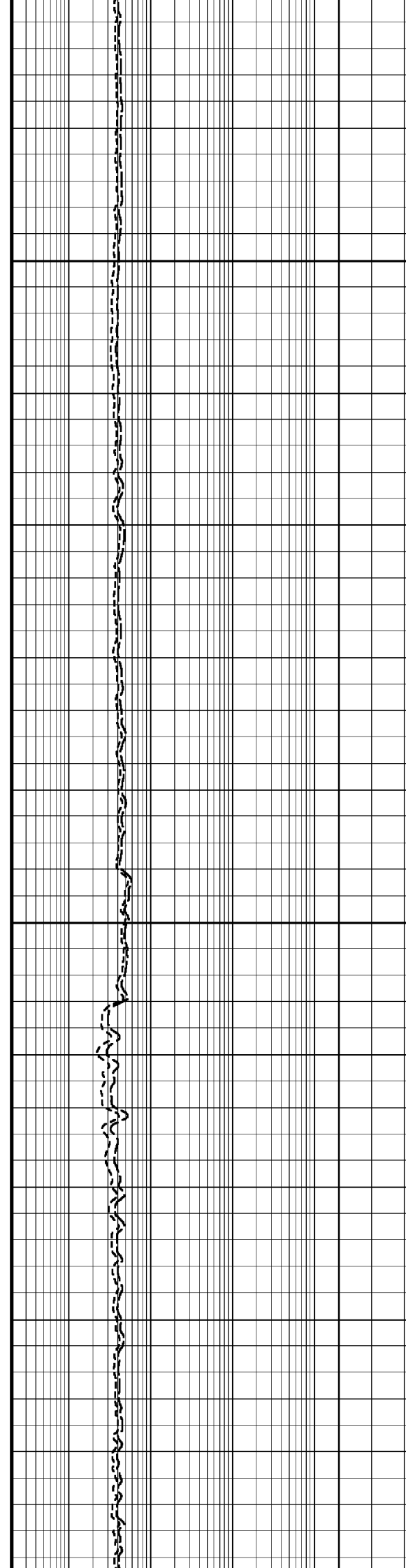
68°

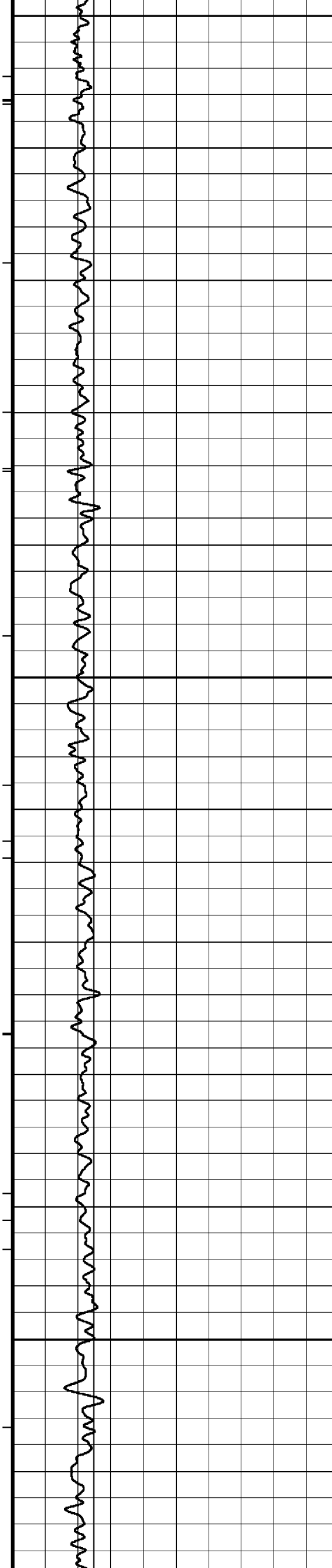
1320
TVD

1330
TVD

69°

1340
TVD





1350
TVD

1360
TVD

70°

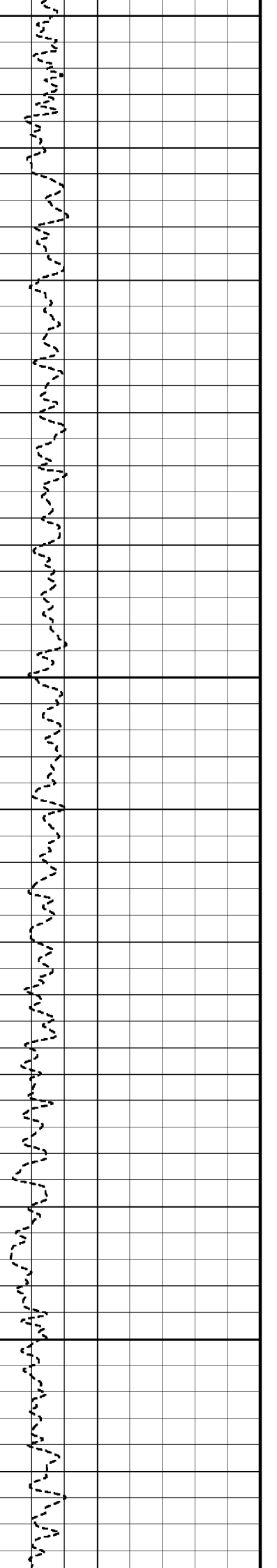
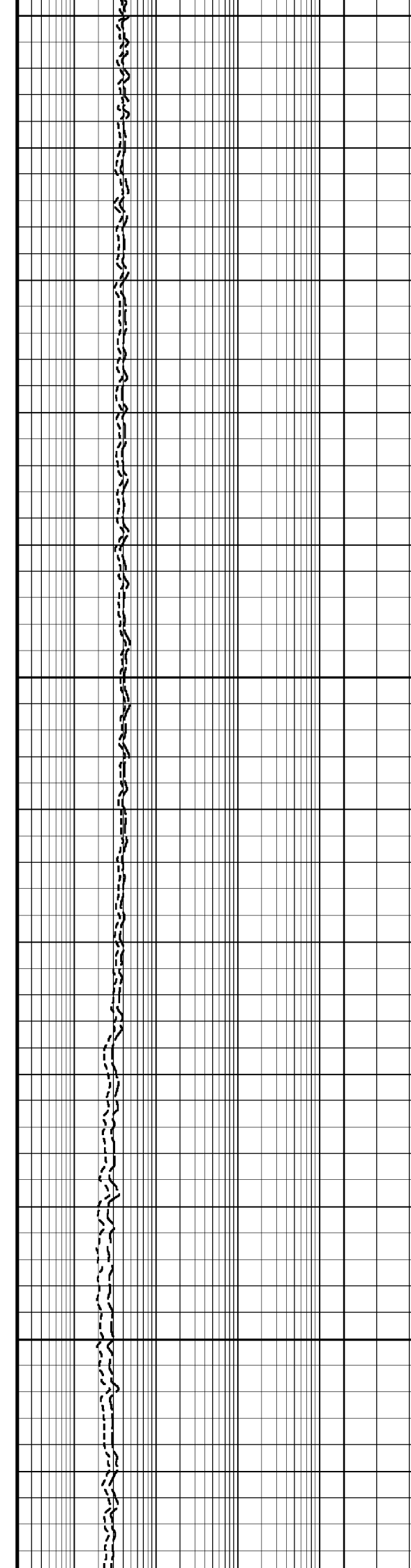
1370
TVD

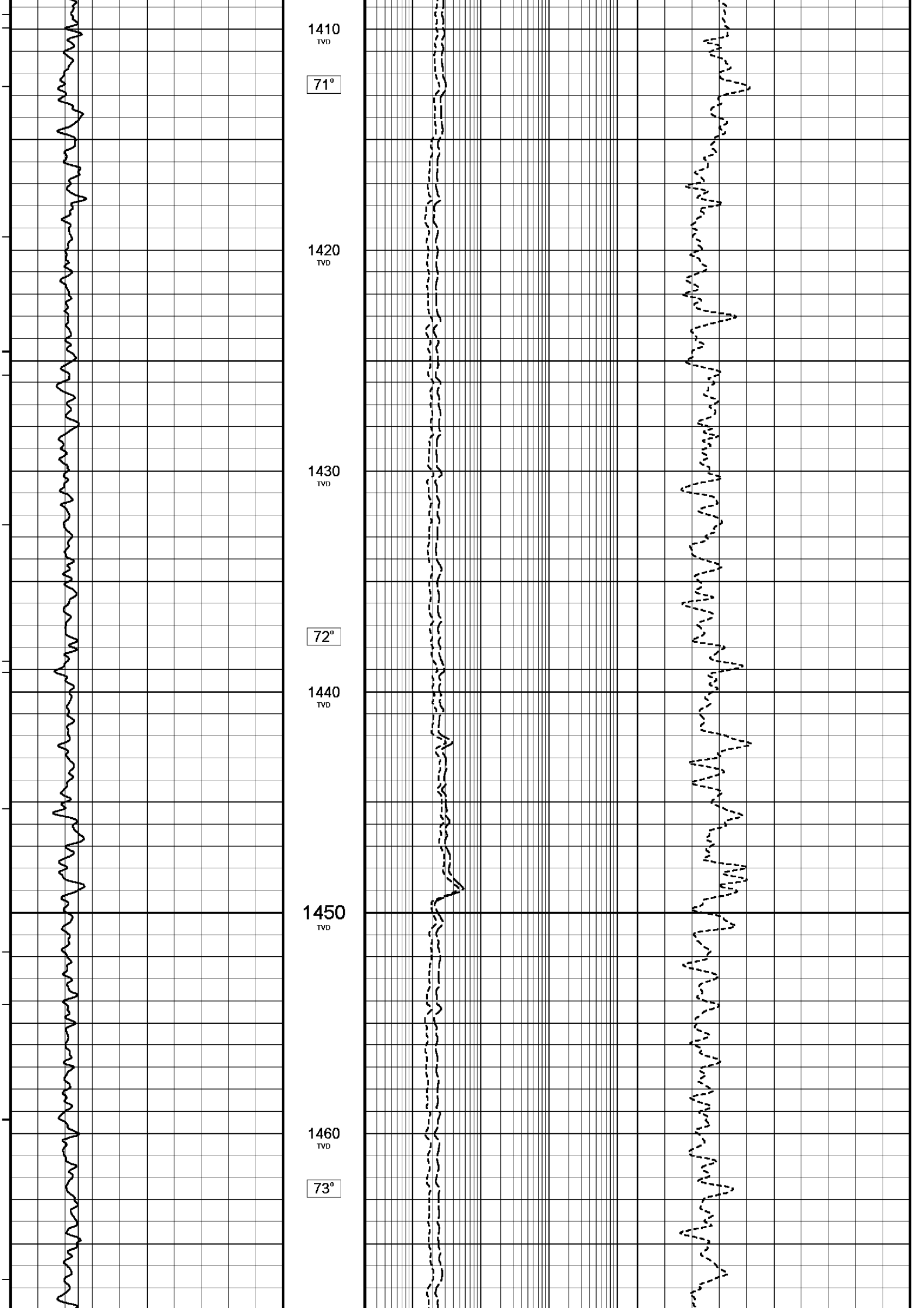
1380
TVD

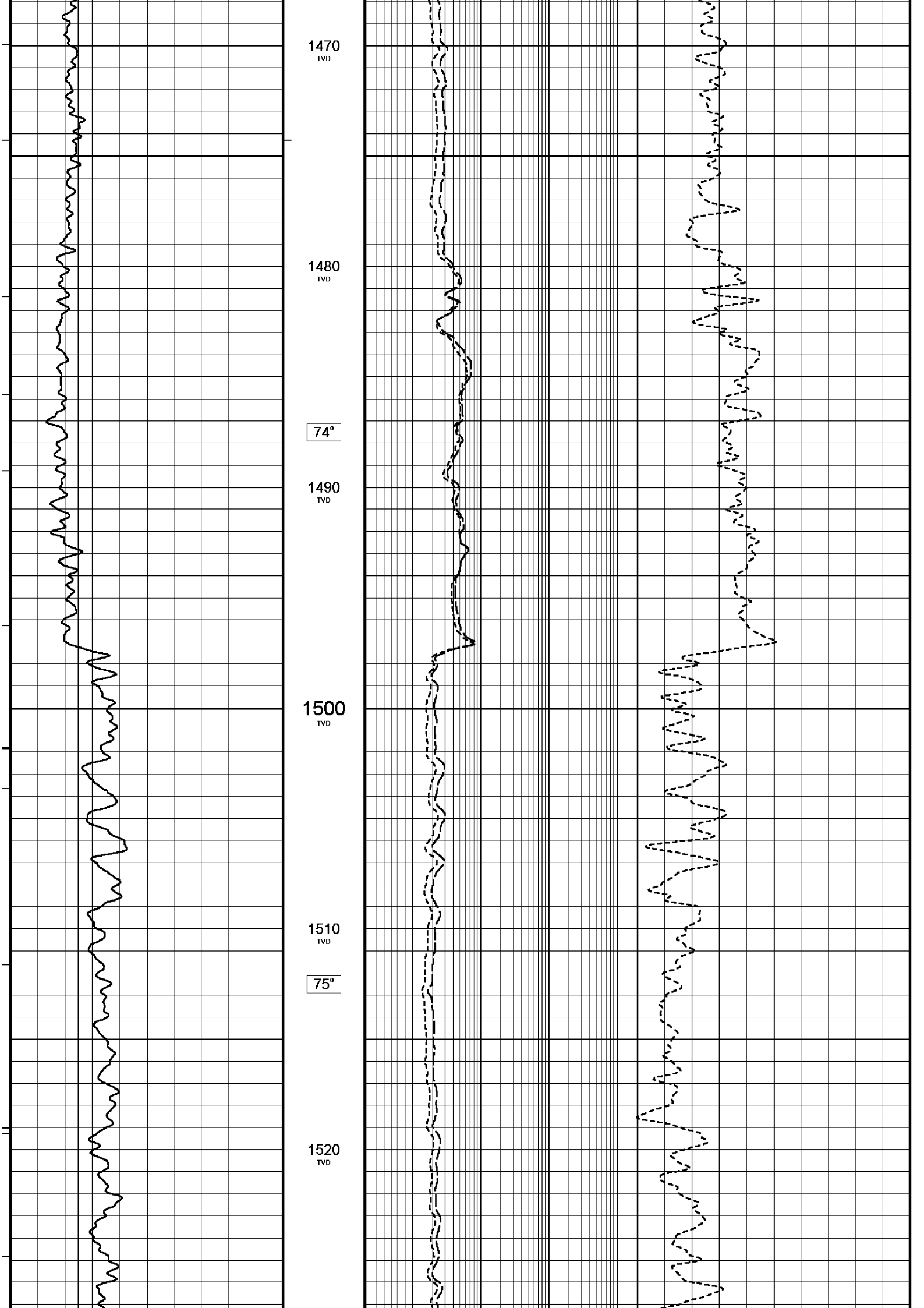
70°

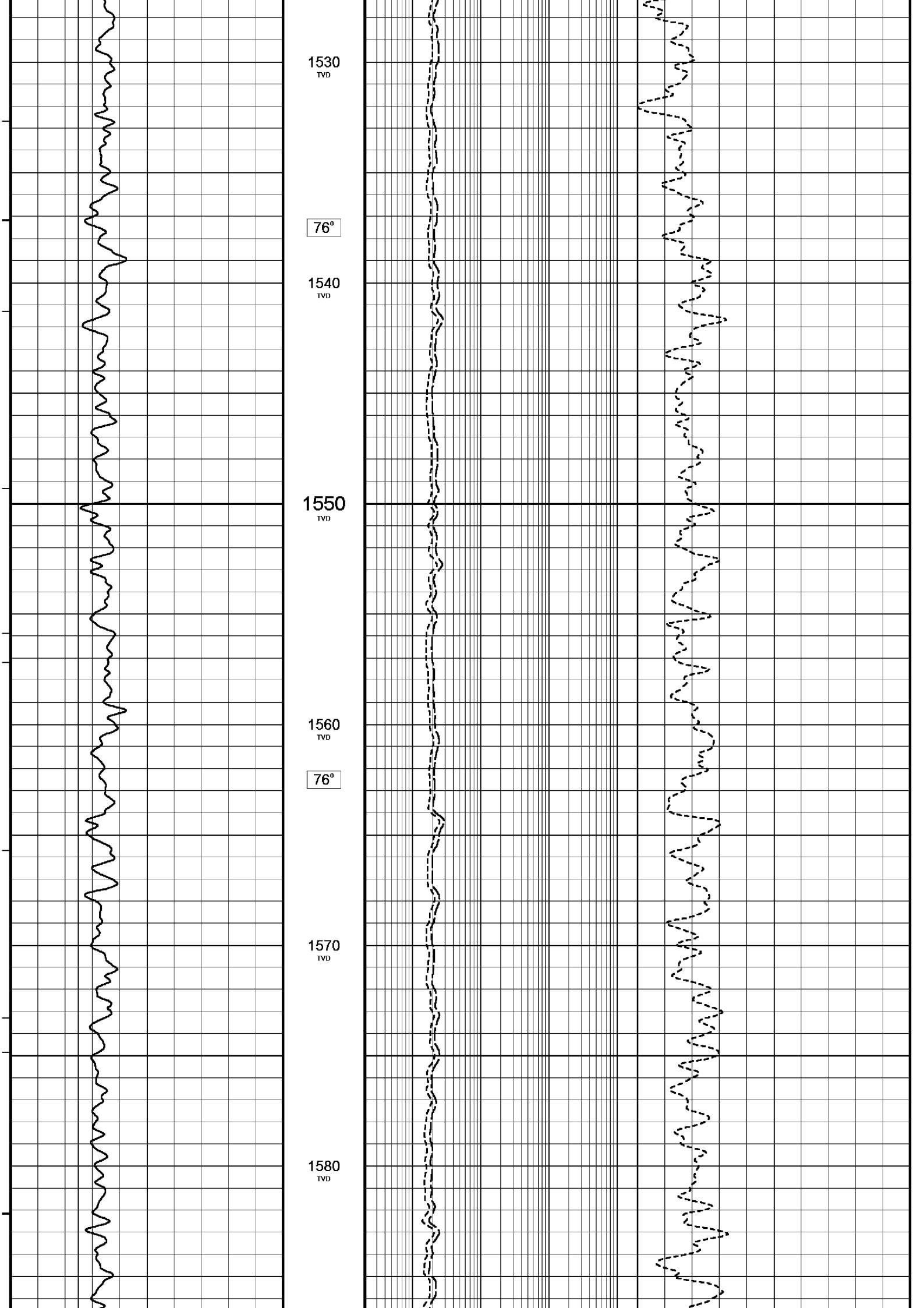
1390
TVD

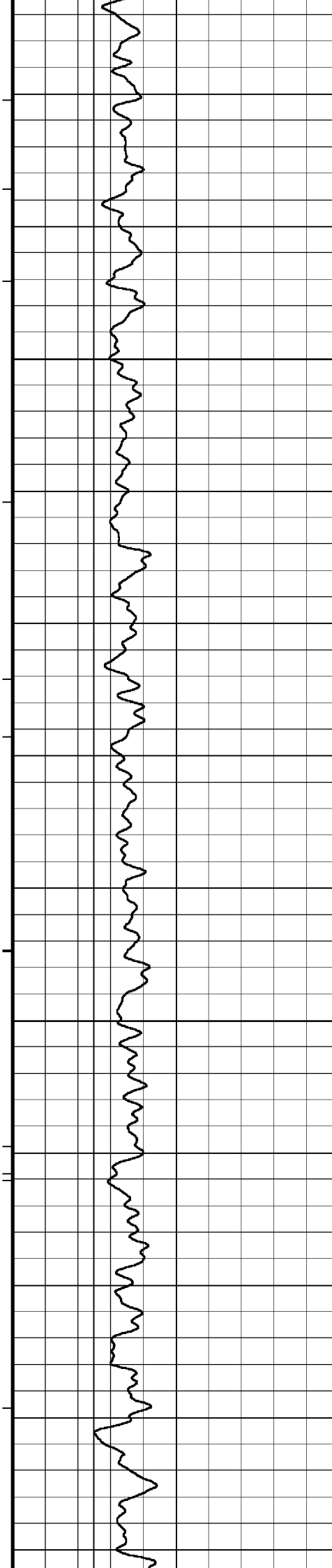
1400
TVD











76°

1590
TVD

1600
TVD

1610
TVD

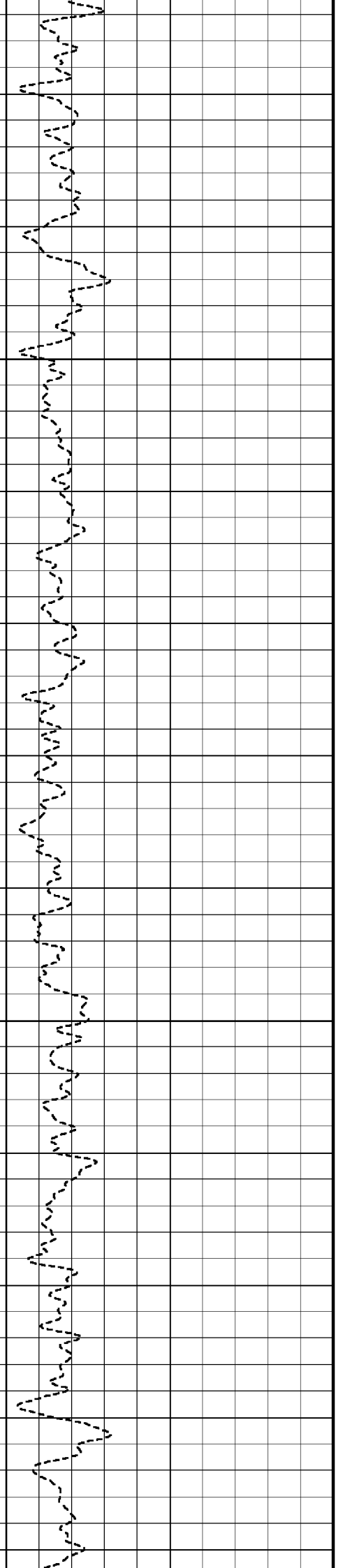
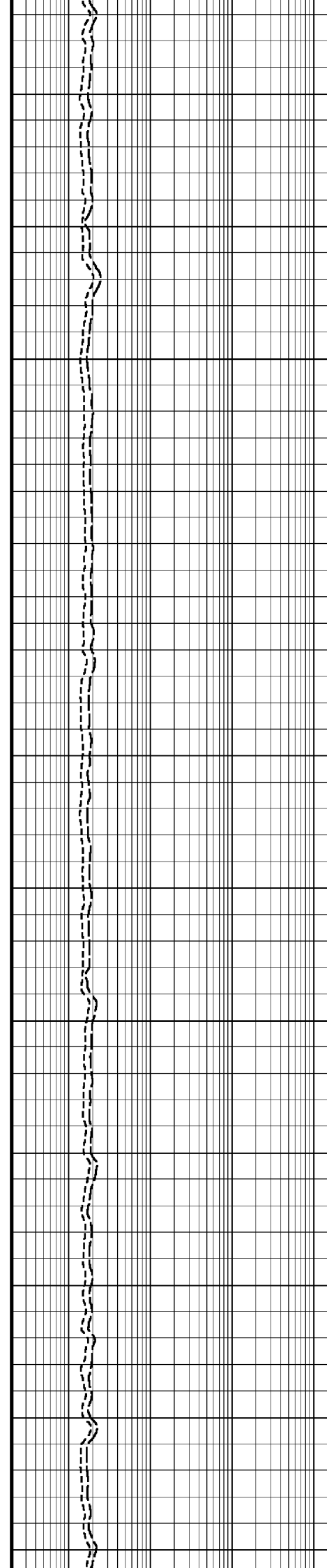
77°

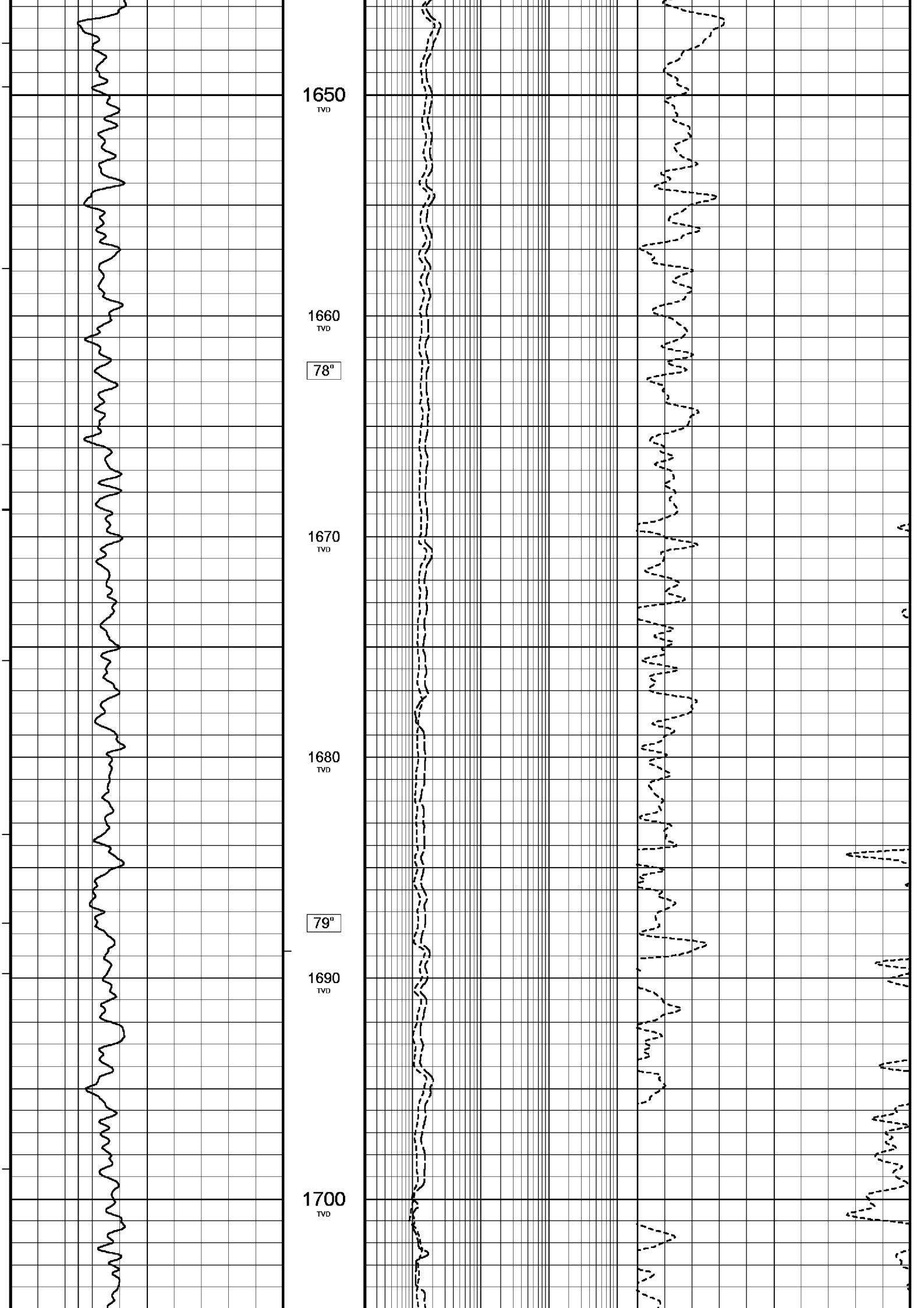
1620
TVD

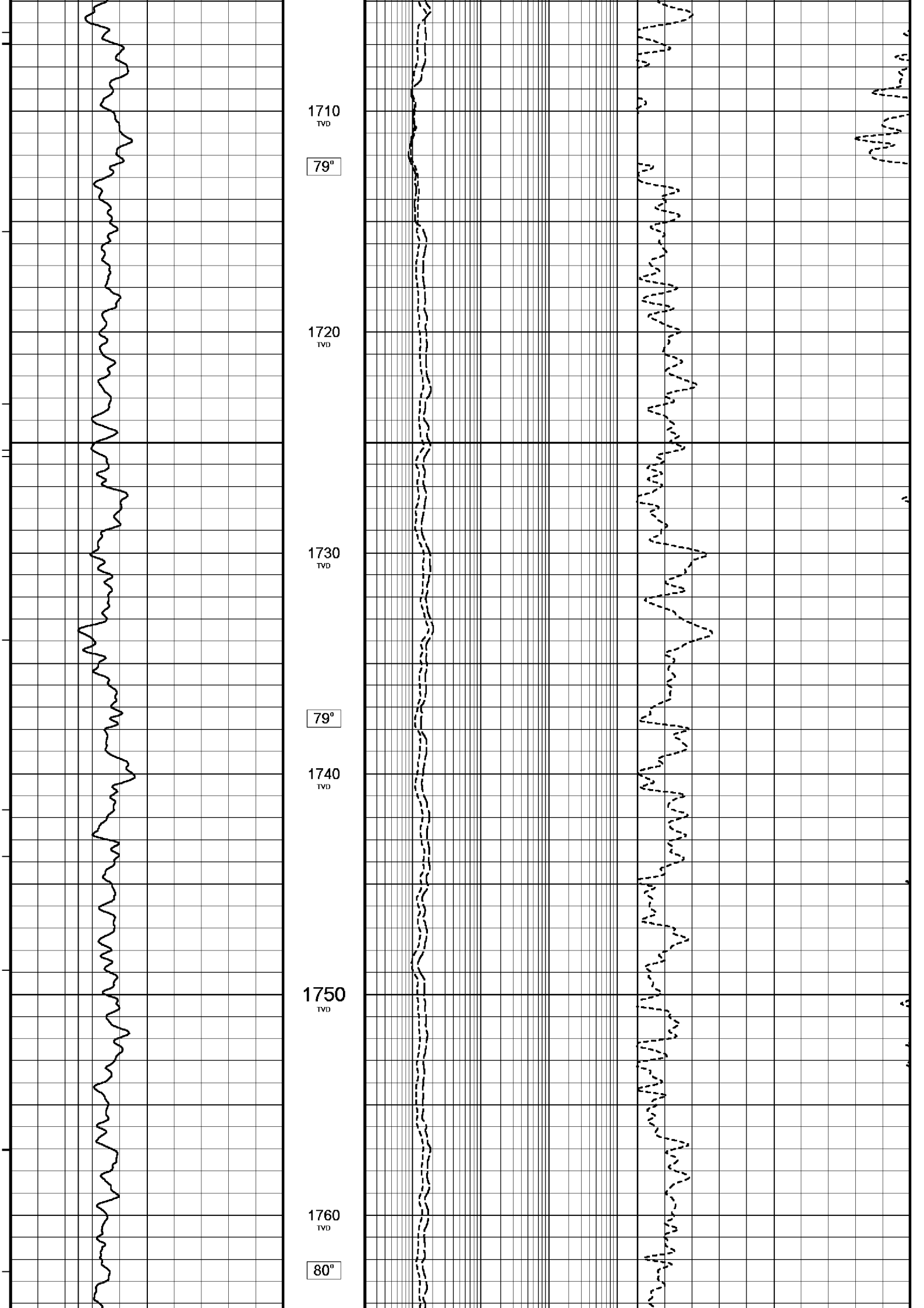
1630
TVD

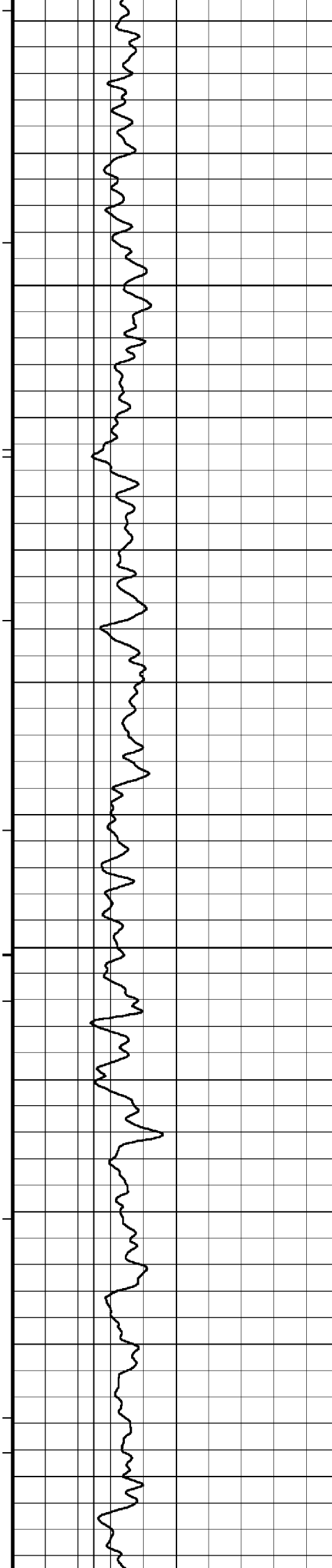
77°

1640
TVD









1770
TVD

1780
TVD

80°

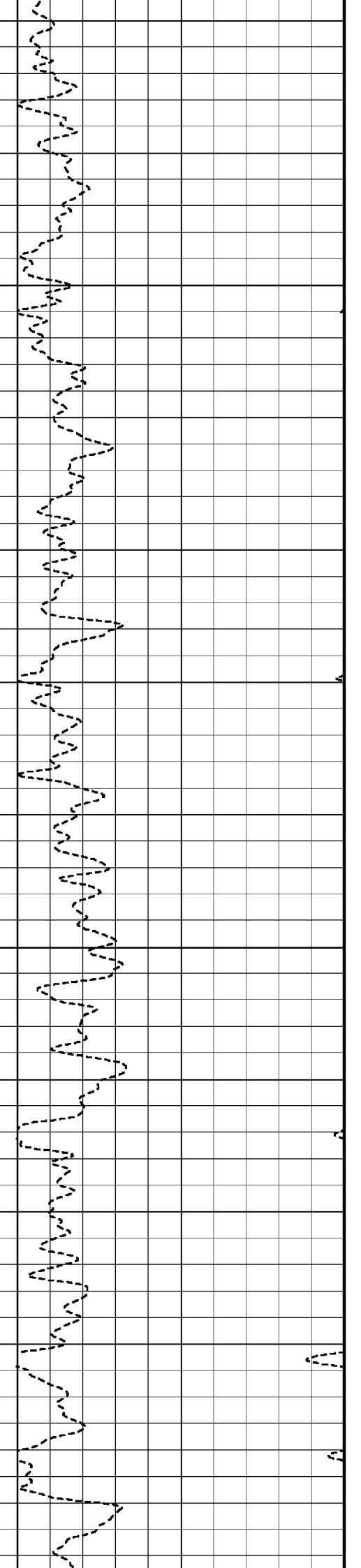
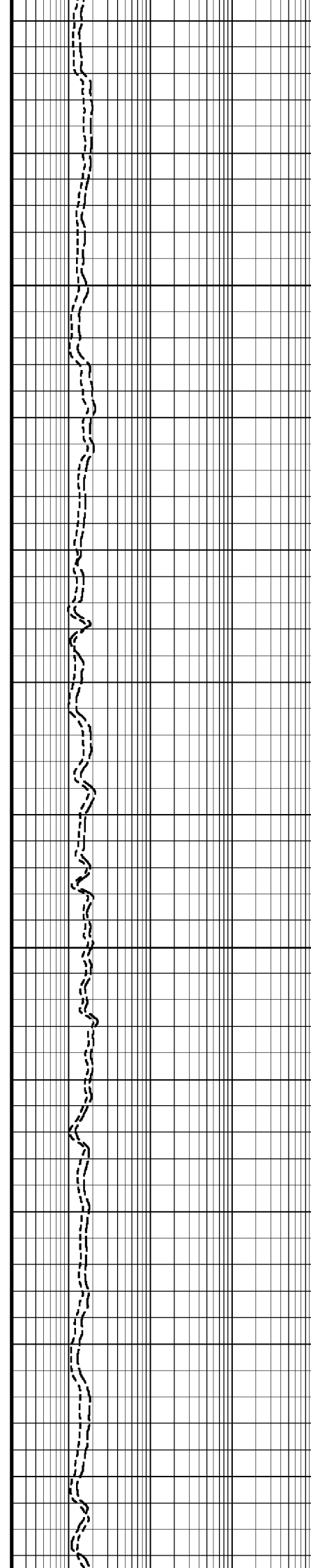
1790
TVD

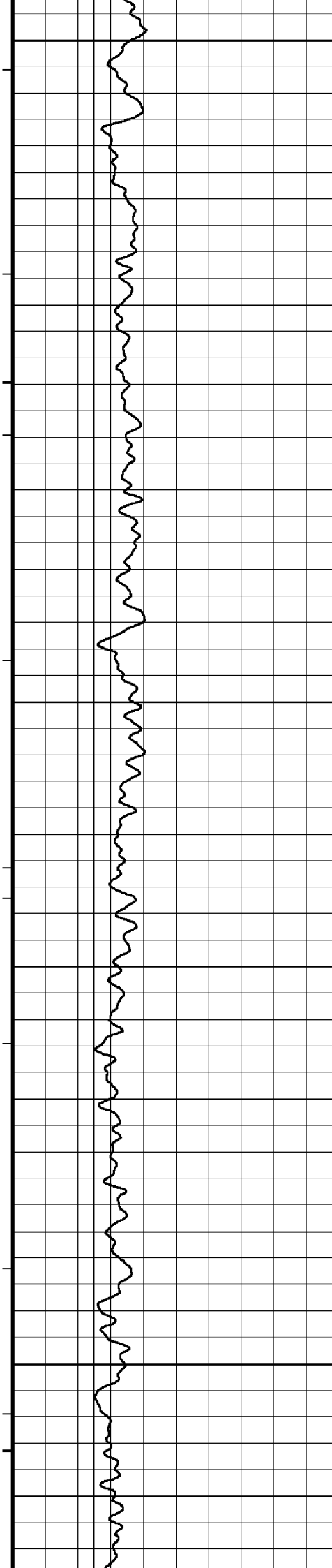
1800
TVD

1810
TVD

81°

1820
TVD





1830
TVD

81°

1840
TVD

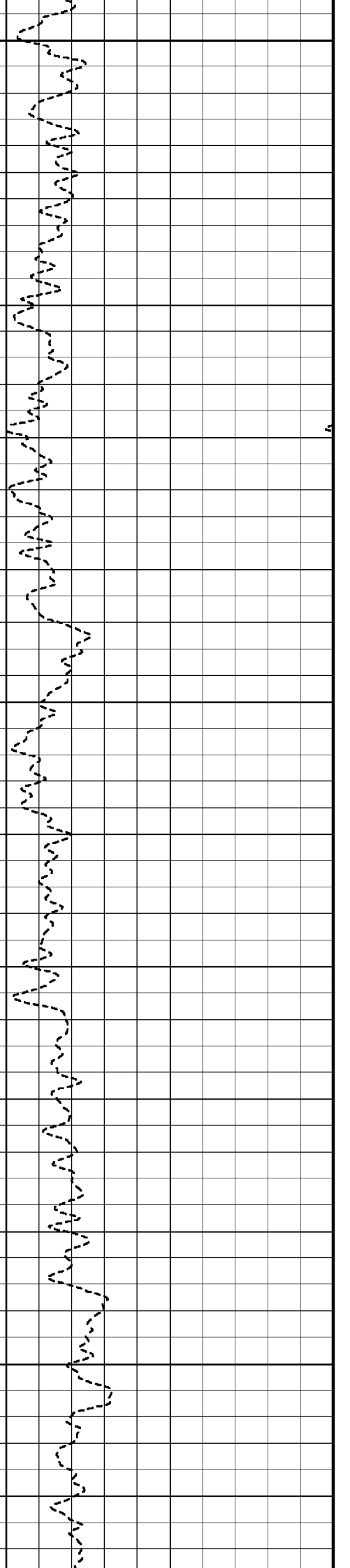
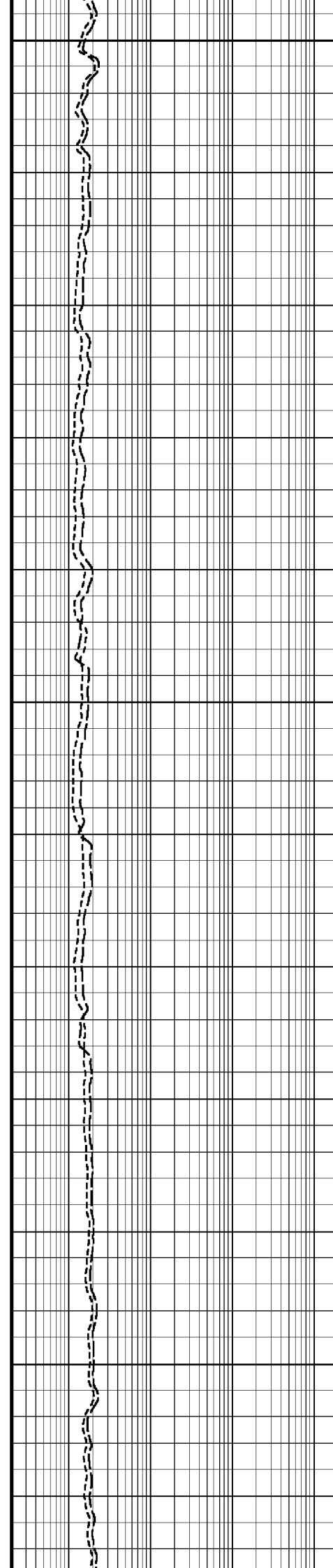
1850
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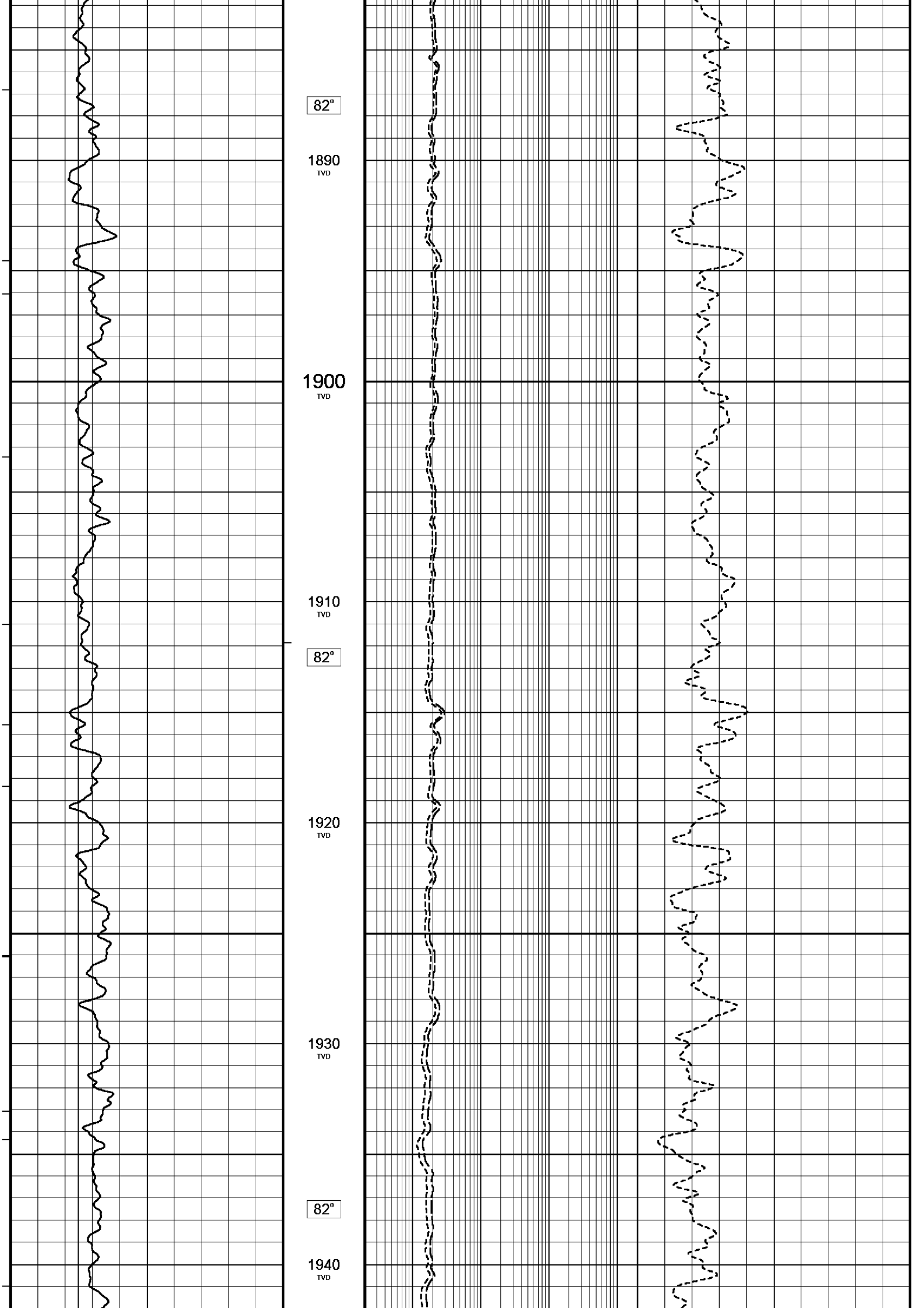
1860
TVD

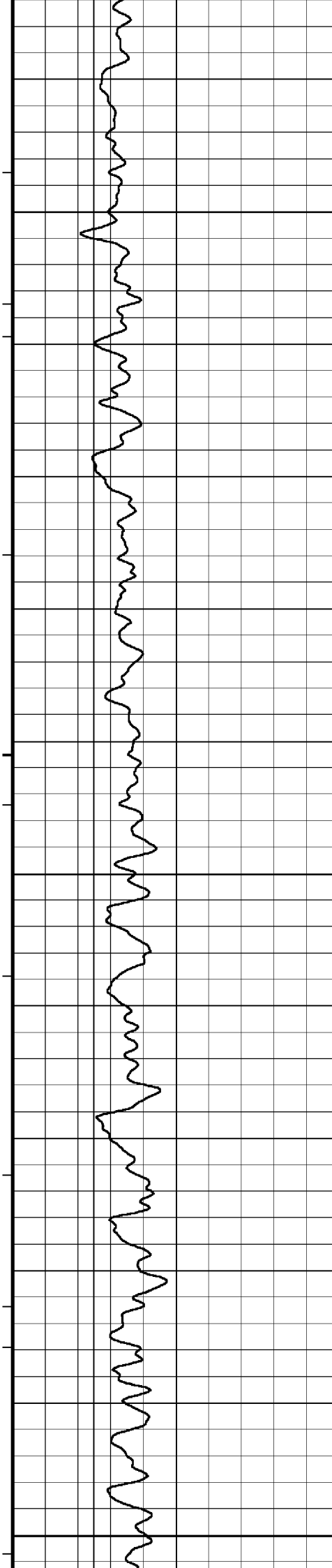
81°

1870
TVD

1880
TVD







1950
TVD

1960
TVD

1970
TVD

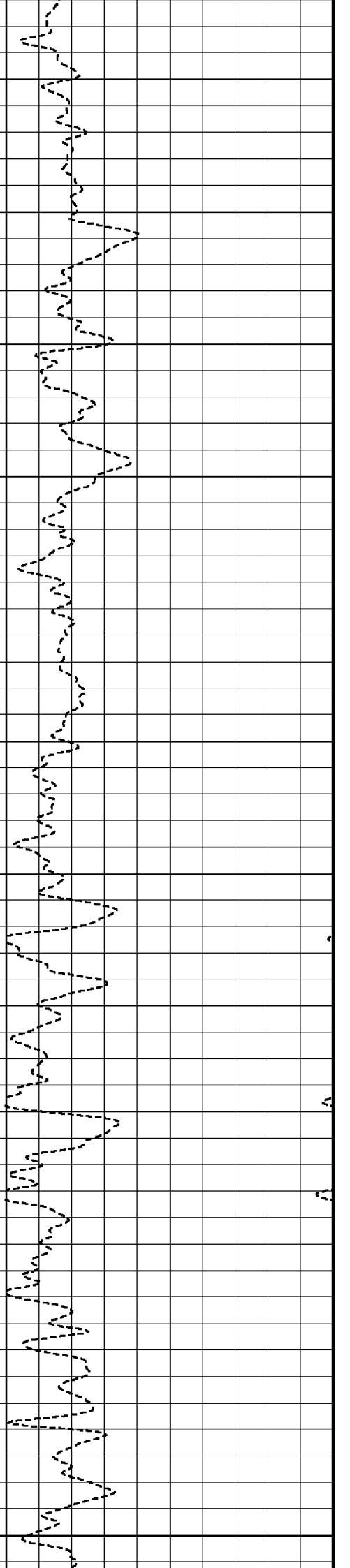
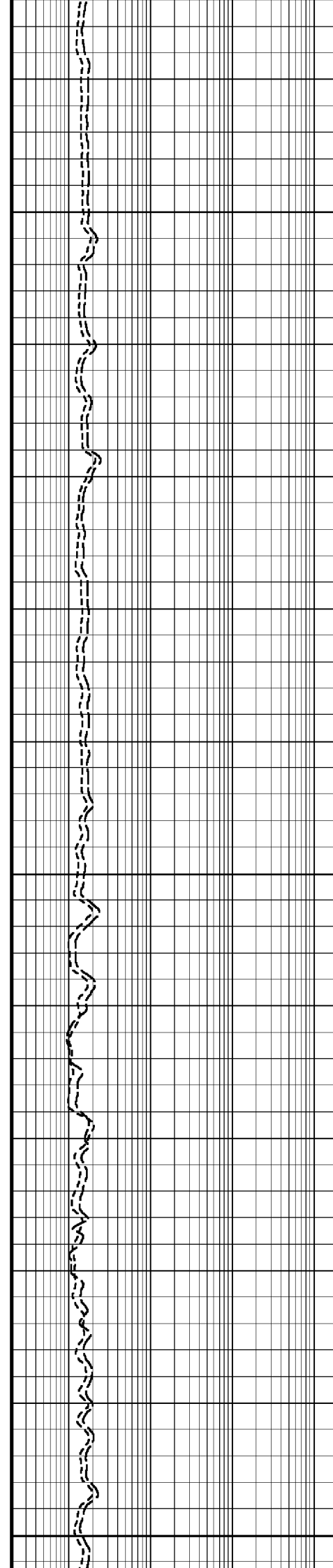
1980
TVD

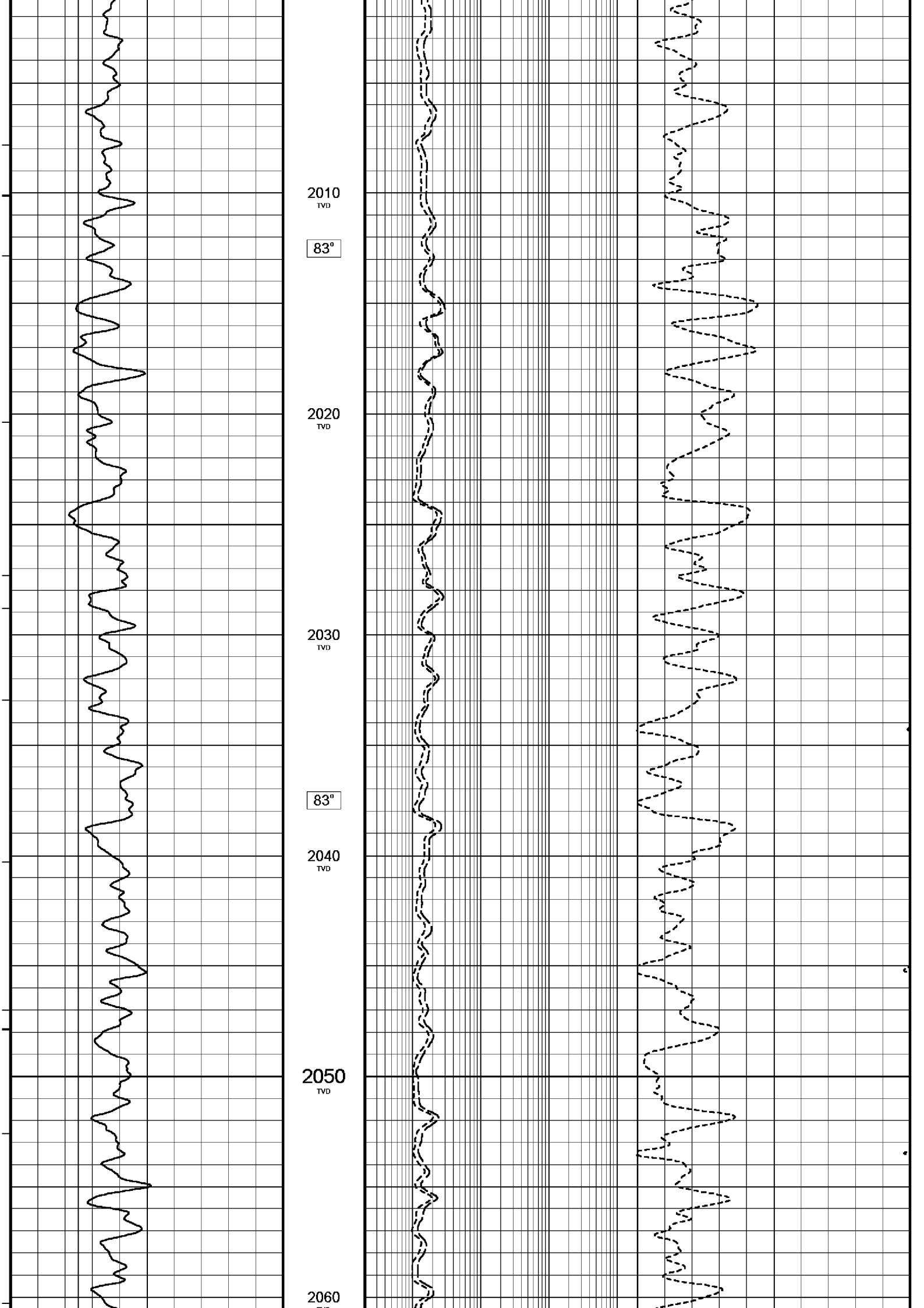
1990
TVD

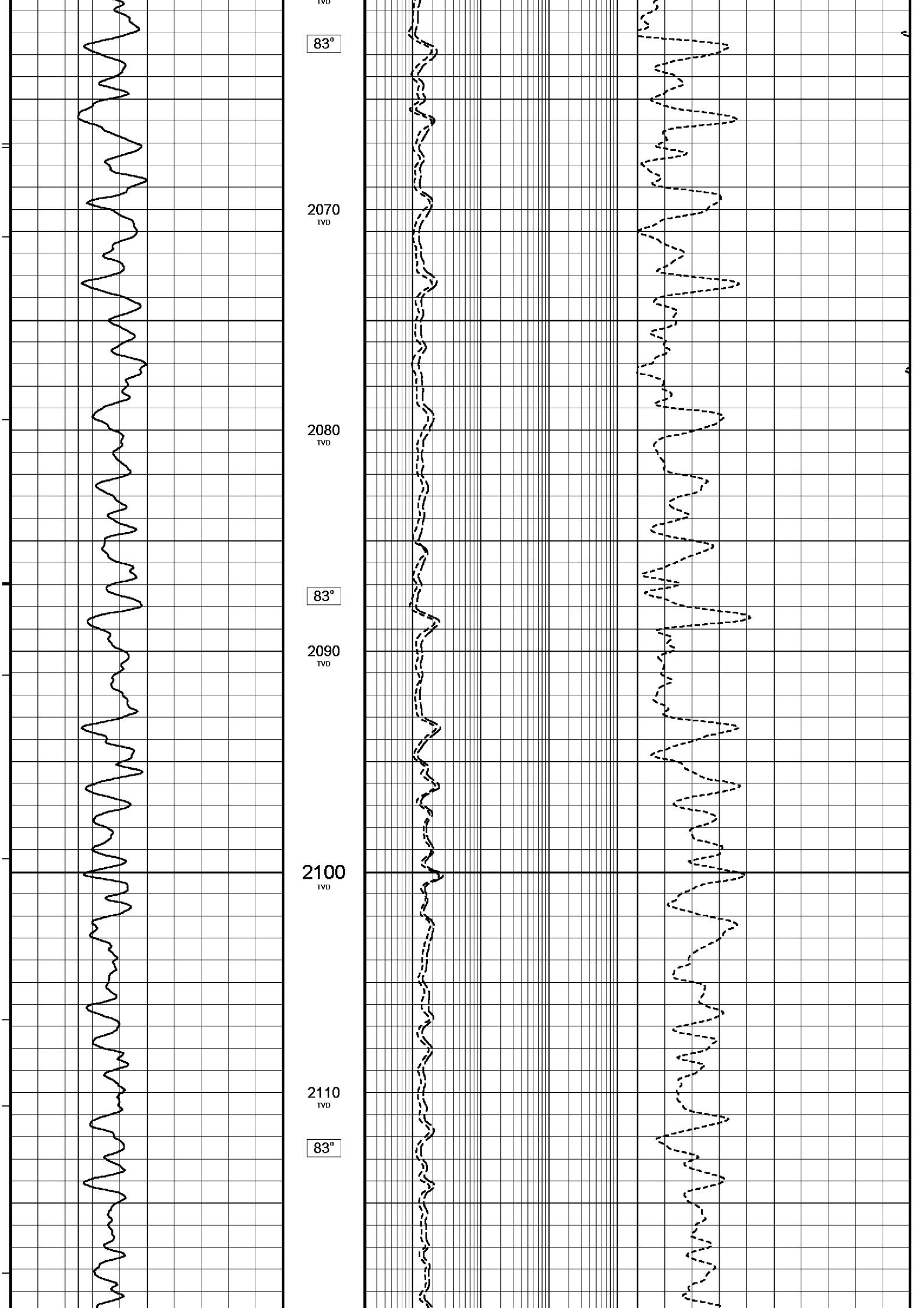
2000
TVD

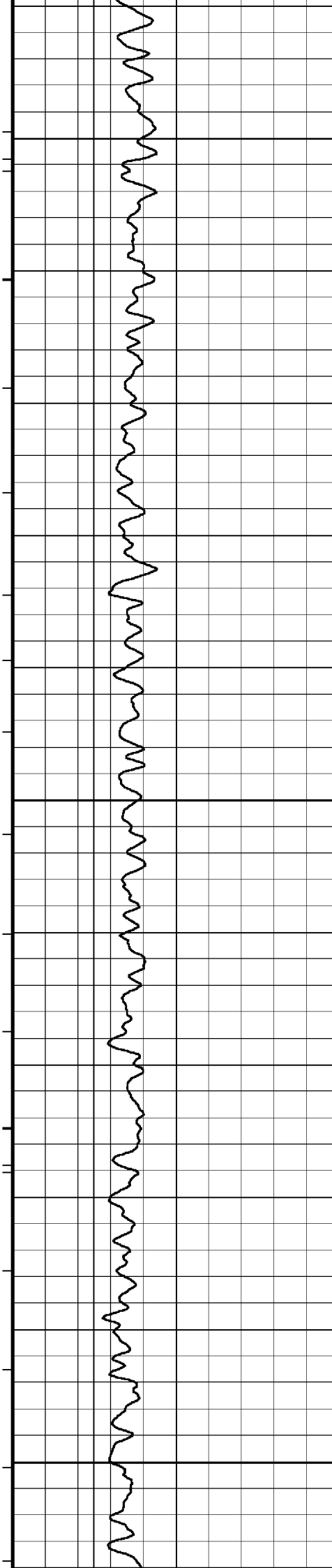
82°

83°









2120
TVD

2130
TVD

84°

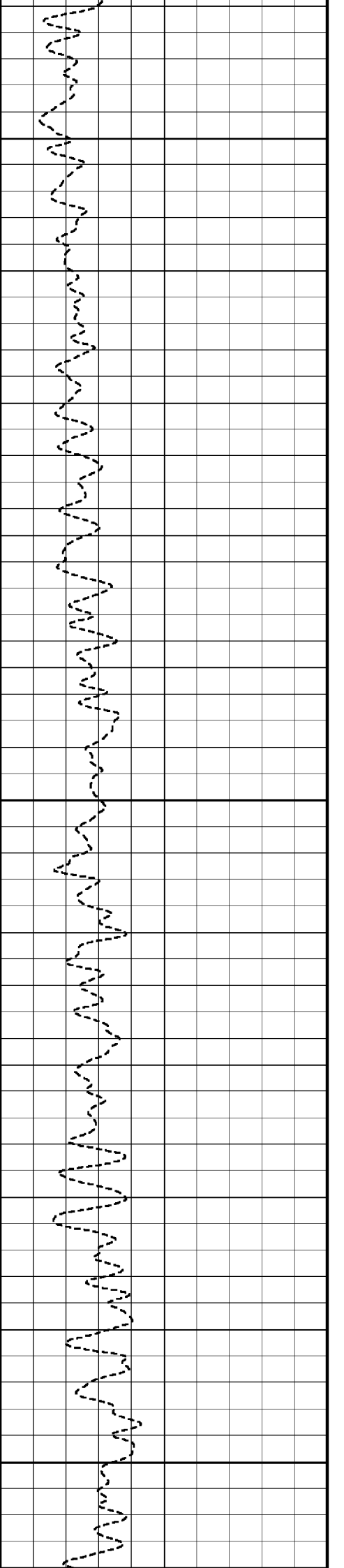
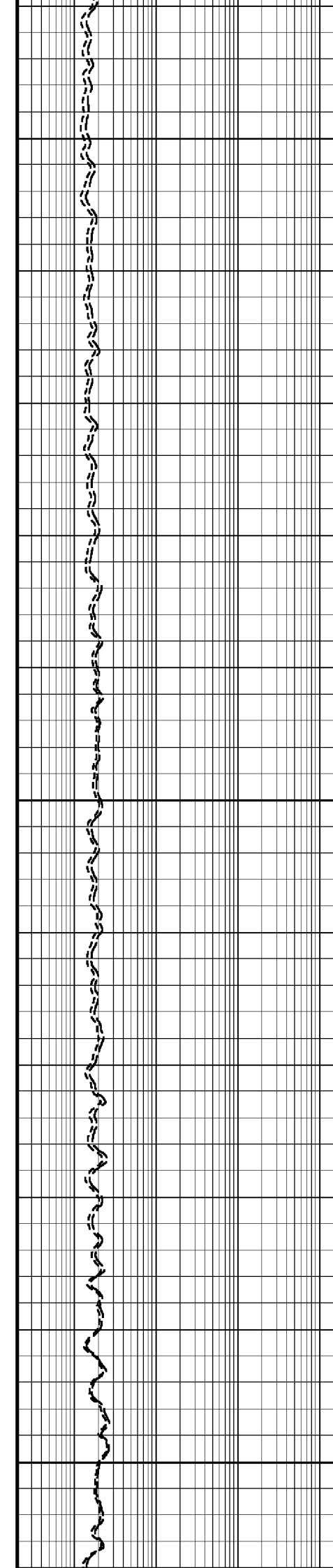
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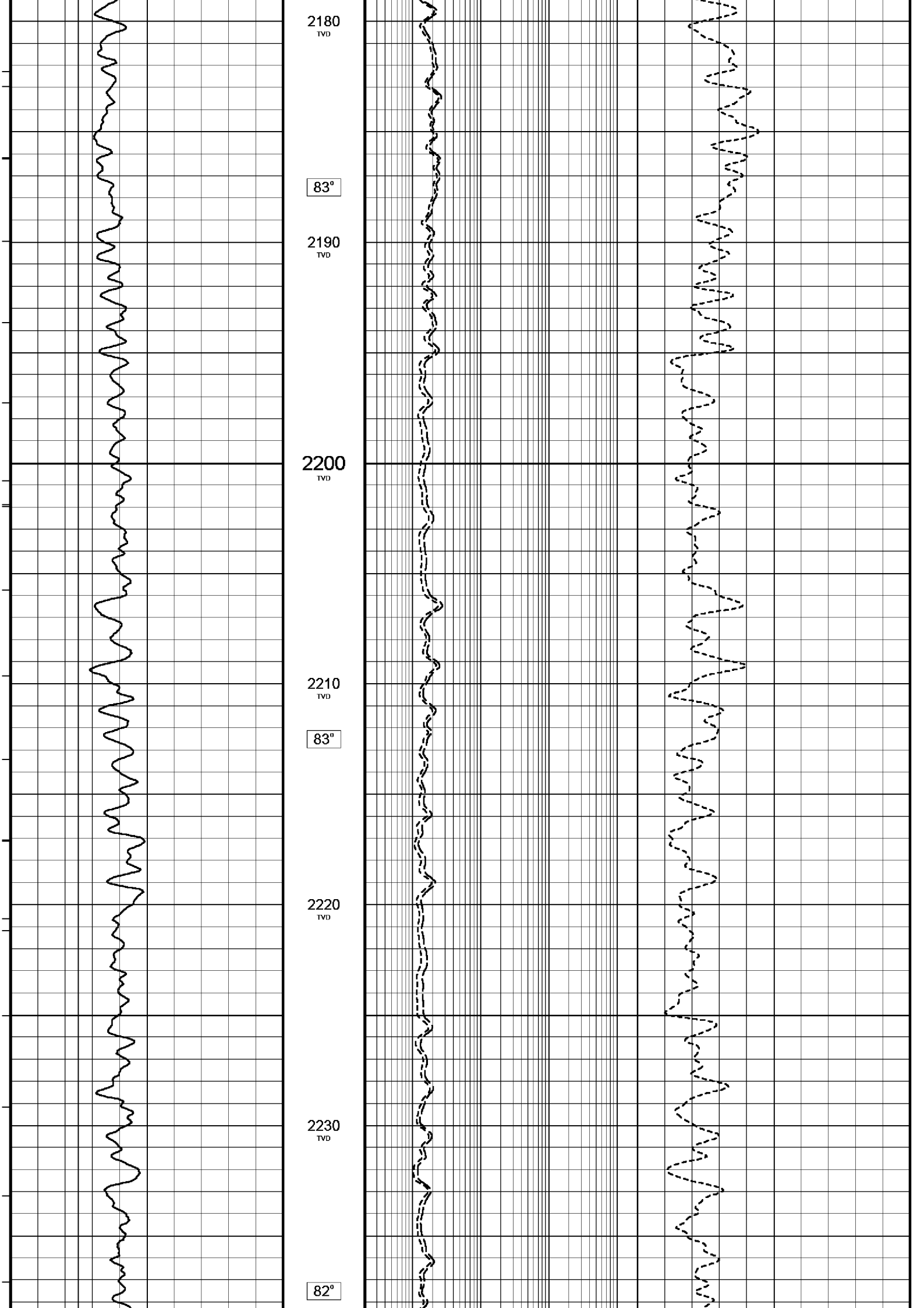
2150
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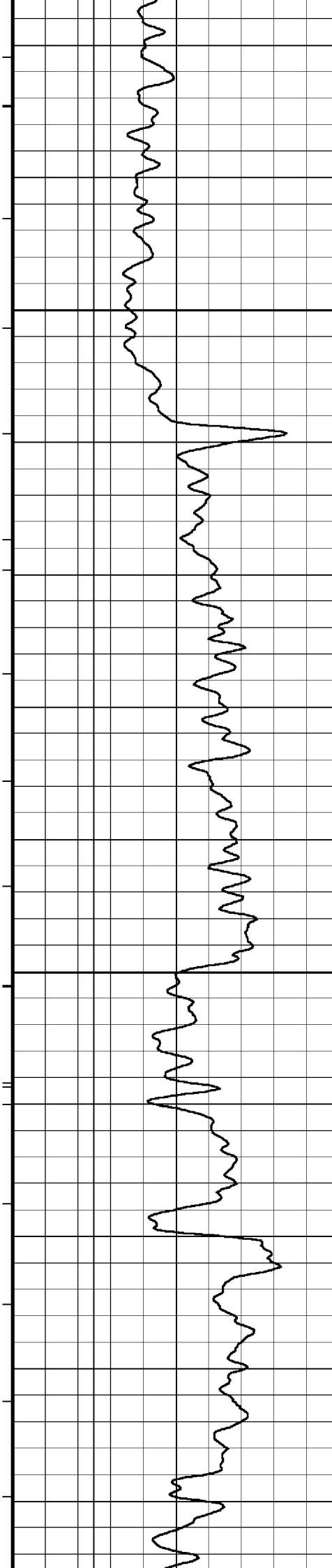
2160
TVD

83°

2170
TVD







2240
TVD

2250
TVD

2260
TVD

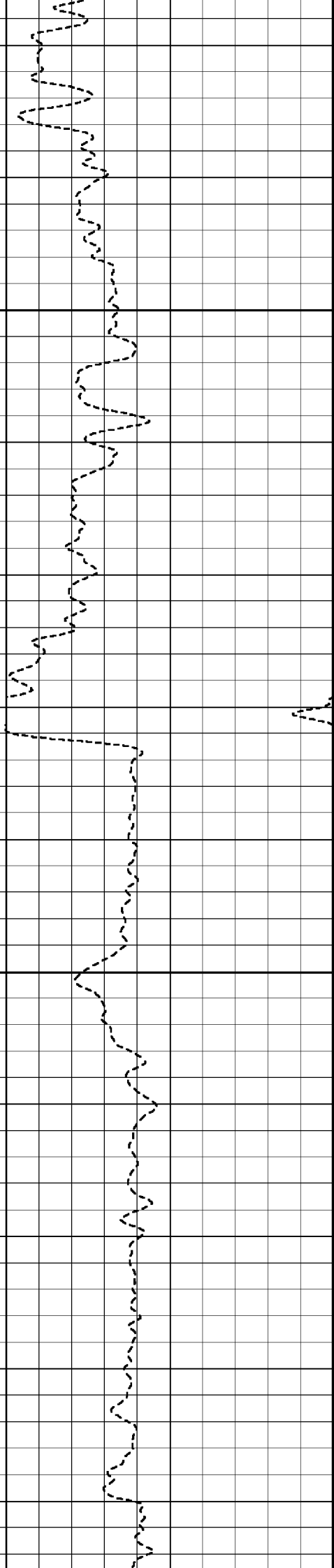
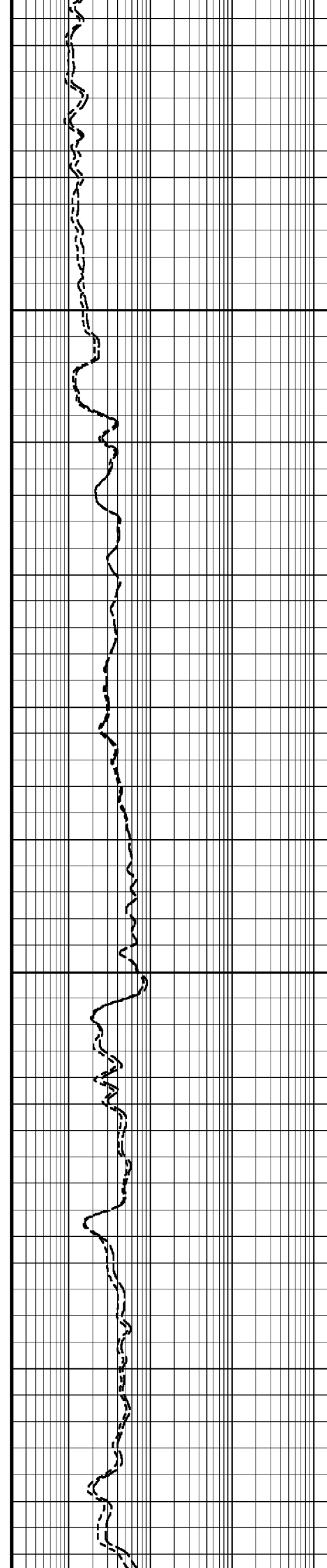
83°

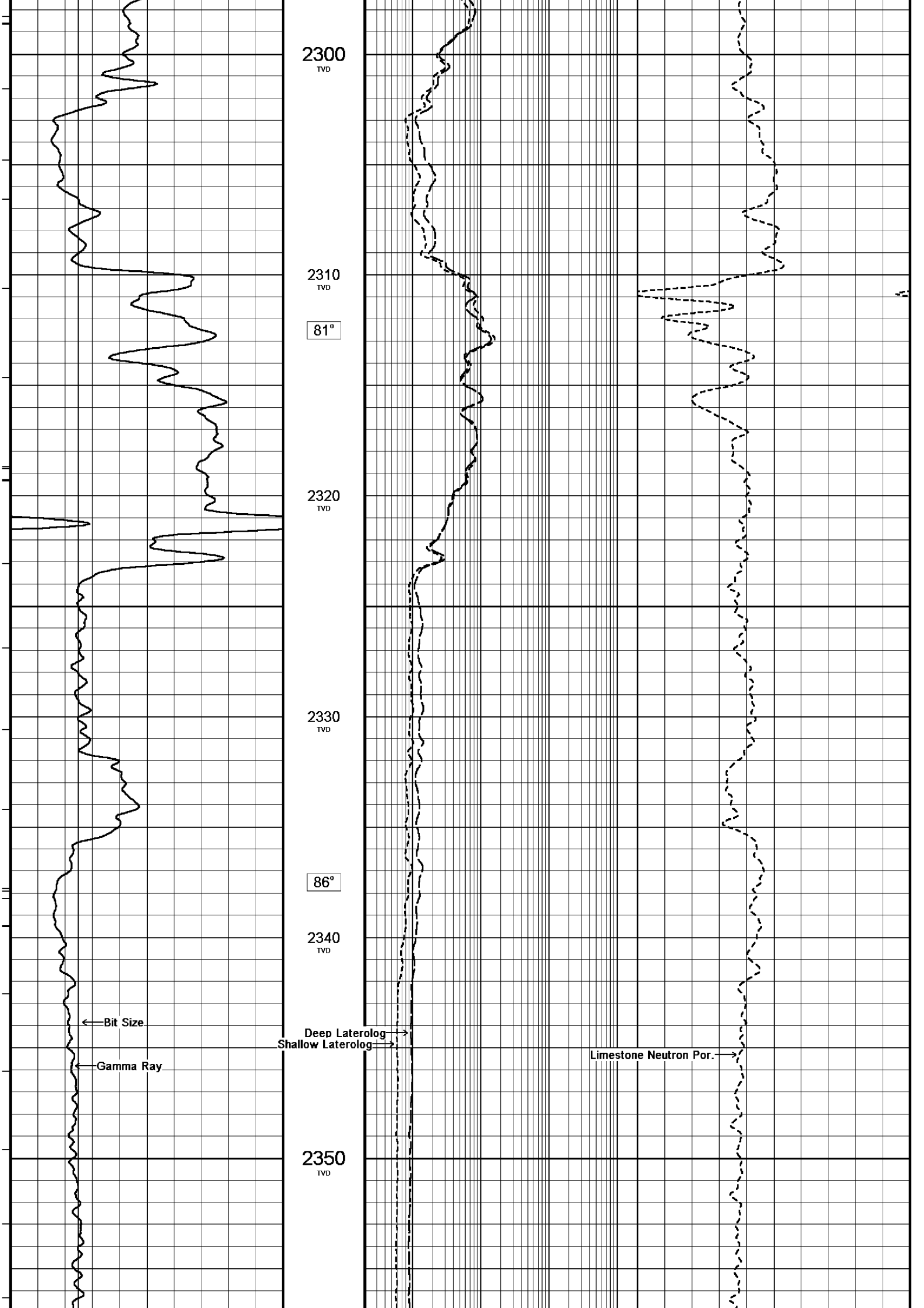
2270
TVD

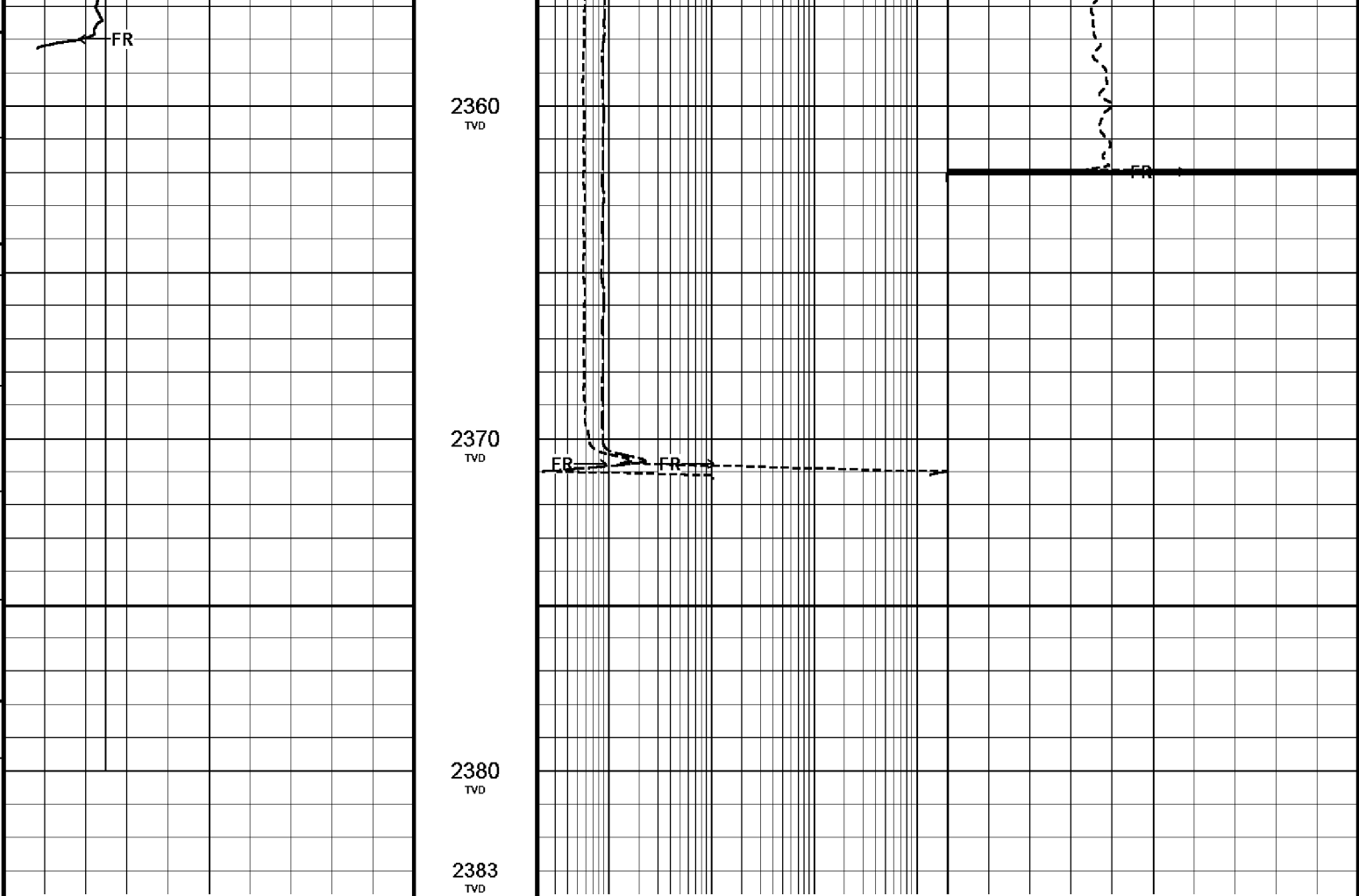
2280
TVD

82°

2290
TVD







Timing Marks
every 60.0 sec

Gamma Ray
API
0 100 200
200 300 400

Bit Size
inches
6 11 16

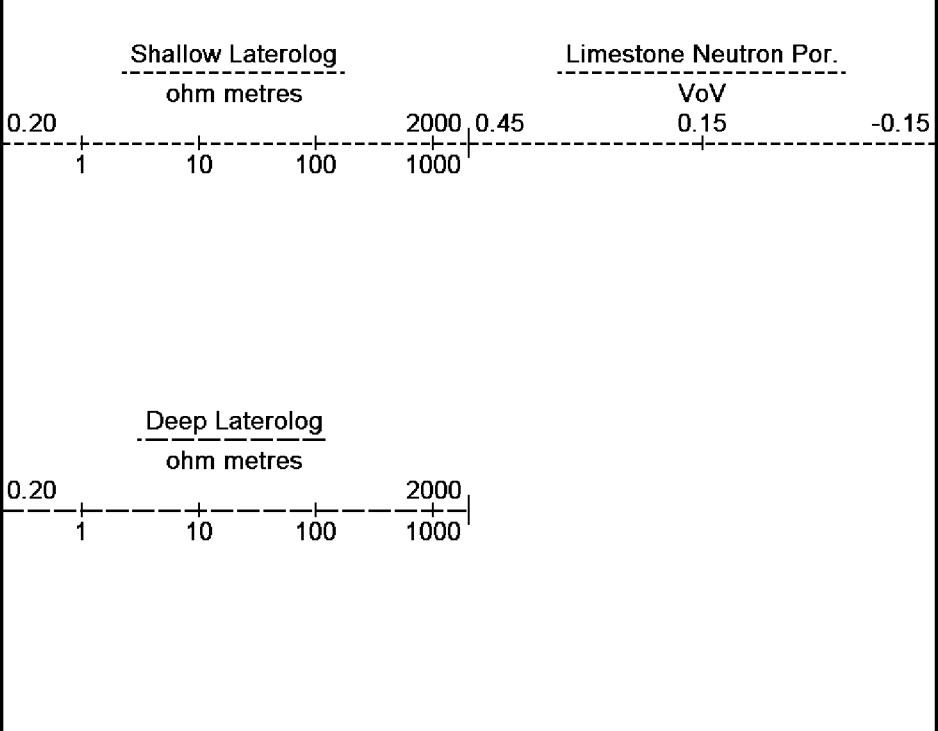
TVD / DSC
in
Metres

Borehole
Temp in
deg C

HVI
every
10 cu ft

Annular
Integral
every
10 cu ft

Replay
Scale
1:200



Depth Based Data - Maximum Sampling Increment 10.0cm
 Plotted on 25-OCT-2006 08:00
 Filename: C:\logs\WKF_W23A\FIELD_DATA\WKF_W23A_MAIN_LOG.dta
 Recorded on 24-OCT-2006 11:22
 System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

↑ MAIN LOG 1:200 ↑

BEFORE SURVEY CALIBRATION
 C:\logs\WKF_W23A\FIELD_DATA\WKF_W23A_MAIN_LOG.dta

General Constants All 000

General Parameters
 Mud Resistivity 0.122 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	Bit Size	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	

High Resolution Temperature Calibration MCG 142

Field Calibration on 20-OCT-2006,23:34

	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 20-OCT-2006 23:54

	Measured	Calibrated (API)
Background	14	9
Calibrator (Gross)	1368	918
Calibrator (Net)	1354	909

Gamma Constants MCG 142

Gamma Calibrator Number 060
Mud Density 1.00 gm/cc
Caliper Source for Processing Bit Size
Tool Position Eccentred
Concentration of KCl 0.00 kppm

Neutron Calibration MDN 119

Base Calibration on 3-OCT-2006 10:16
Field Check on 21-OCT-2006 01:18

Base Calibration		Measured		Calibrated (cps)	
	Near	Far	Near	Far	
Ratio	3038	93	3714	110	33.764
Field Calibrator at Base				Calibrated (cps)	
Ratio			1625	2401	0.677
Field Check				Calibrated (cps)	
Ratio			1704	2463	0.692

Neutron Constants MDN 119

Neutron Source Id NSN-E-739
Neutron Jig Number NEC-E-E052
Epithermal Neutron No
Caliper Source for Processing Bit Size
Stand-off 0.00 inches
Mud Density 1.00 gm/cc
Limestone Sigma 7.10 cu
Sandstone Sigma 4.26 cu
Dolomite Sigma 4.70 cu
Formation Pressure Source None
Formation Pressure 0.00 kpsi
Temperature Source MCG External Temperature
Temperature 20.00 degrees C
Mud Salinity 0.00 kppm
Formation Fluid Salinity Source None
Formation Fluid Salinity 0.00 kppm
Barite Mud Correction Not Applied

Caliper Calibration MPD 116

Base Calibration on 2-OCT-2006 11:51
Field Calibration on 21-OCT-2006 01:05

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	13024	4.01
2	22384	5.99
3	32405	7.98
4	42176	9.94
5	53631	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.95	7.98

Laterolog Calibration MLE 031

Base Calibration on 1-OCT-2006 14:11
Field Check on 1-OCT-2006,14:21

Base Calibration

Channel	Resistor 1	Measured		Calibrated (ohm-m)	
		Resistor 2	Resistor 1	Resistor 2	
Shallow	9.8	976.4	13.2	1321.0	
Deep	9.7	976.0	7.5	755.0	
Groningen	9.8	977.3	8.5	854.0	

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	48.6	48.6
Deep	27.8	27.8
Groningen	251.4	251.4

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	None	

DOWNHOLE EQUIPMENT

C:\logs\WKF_W23A\FIELD_DATA\WKF_W23A_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 31 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 141 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 129 Length: 0.65 m Weight: 15.4 lb

MBE 21 3rd bridle
MLK 111 Length: 3.76 m Weight: 94.8 lb

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

Compact Gamma
MCG 142 Length: 2.65 m Weight: 63.9 lb

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

Compact Memory Sub A.C
MMS 38 Length: 0.95 m Weight: 30.9 lb

Compact Knuckle Joint
SKJ 101 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 95 Length: 1.74 m Weight: 33.1 lb

Compact Neutron
MDN 119 Length: 1.53 m Weight: 50.7 lb

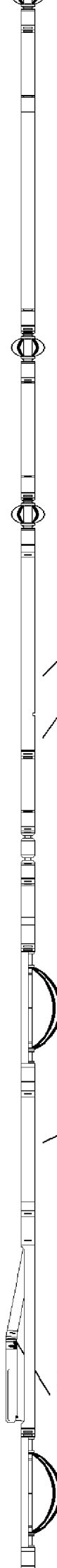
26.17 m NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD 116 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 24 Length: 1.74 m Weight: 33.1 lb

23.27 m DCOR - Density Correction
23.25 m PDPE - PE



Compact Swivel Head Adaptor F
SHA 73 Length: 0.83 m Weight: 26.5 lb

Compact Knuckle Joint
SKJ 46 Length: 0.66 m Weight: 24.3 lb

Compact Inline Standoff B
MIS 132 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 139 Length: 0.65 m Weight: 15.4 lb

Compact Laterolog Electrode Sub.
MLE 31 Length: 3.76 m Weight: 92.6 lb

Compact Inline Standoff B
MIS 138 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 73 Length: 0.65 m Weight: 15.4 lb

Compact Sonic
MSS 66 Length: 3.82 m Weight: 72.8 lb

Compact Inline Standoff B
MIS 127 Length: 0.65 m Weight: 15.4 lb

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

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



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

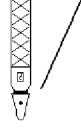
4.60 m TR22 - 5' Transit Time
4.60 m TR11 - 4' Transit Time
4.60 m TR21 - 3' Transit Time
4.60 m TR12 - 6' Transit Time

4.60 m DT35 - 3-5' Compensated Sonic

Tool Zero (0.44m from bottom)

All measurements relative to tool zero.

Total Length: 54.01 m Weight: 1265.5 lb



COMPANY ESSO AUSTRALIA PTY.LTD
WELL WKF W23A
FIELD KINGFISH GDA94
PROVINCE/COUNTY BASS STRAIT, VICTORIA
COUNTRY/STATE AUSTRALIA

Elevation Kelly Bushing		metres	First Reading	2370.80	metres
Elevation Drill Floor	33.43	metres	Depth Driller	2382.04	metres
Elevation Ground Level	-76.13	metres	Depth Logger	2382.04	metres



DUAL LATEROLOG - GR
DENSITY - NEUTRON
1:200 TVD