



**PRECISION**  
ENERGY SERVICES

**DUAL LATEROLOG - GR**  
**DENSITY - NEUTRON**

**Compact**

**1:200 TVD**

COMPANY

ESSO AUSTRALIA PTY LTD

WELL

BREAM A10A

FIELD

BREAM

PROVINCE/COUNTY

BASS STRAIT

COUNTRY/STATE

AUSTRALIA

LOCATION

S 38 29 58.824, E 147 46 19.976

N 5738460.340 m, E 567336.310 m

**FINAL PRINT**

LSD SEC TWP RGE Other Services  
COMPENSATED SONIC

API Number

Permit Number

Permanent Datum MSL , Elevation 0.0 metres

Log Measured From RT @ 32.82m above Permanent Datum

Drilling Measured From RT

Elevations:  
KB 32.82 metres  
DF 32.82 metres  
GL -59.40 metres

Date 16-MAY-2005

Run Number ONE

Depth Driller 2717.18 metres

Depth Logger 2212.30 metres

First Reading 2699.70 metres

Last Reading 1836.80 metres

Casing Driller 1836.38 metres

Casing Logger 1836.80 metres

Bit Size 8.50 inches

Hole Fluid Type KC/POLY/GYL

Density / Viscosity 10.10 lb/USg 30.00 cP

PH / Fluid Loss 9.00 3.00 ml/30Min

Sample Source FLOWLINE

Rm @ Measured Temp 0.134 @ 25.0 ohm-m

Rmf @ Measured Temp 0.103 @ 25.0 ohm-m

Rmc @ Measured Temp 0.236 @ 25.0 ohm-m

Source Rmf / Rmc PRESS PRESS

Rm @ BHT 0.053 @ 97.3 ohm-m

Time Since Circulation 28.5 HRS

Max Recorded Temp 104.10 deg C

Equipment Name CWS/CML

Equipment / Base 1 SALE

Recorded By G. MCMANUS, B. MOSS

Witnessed By TREVOR LOBO

CIRC STOPPED 21:00 14-MAY

## BOREHOLE RECORD

Bit Size  
inches  
8.500

Depth From  
metres  
2258.80

Depth To  
metres  
3379.50

## CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	13.375	0.00	921.00	54.50
L-80	9.625	0.00	2258.80	47.00

## REMARKS

RIG: NABORS 453

5" SHUTTLE/MEMORY COMPACT OPERATION.  
CREW: G MCMANUS , R TENCH , B MOSS , K LUCIEER.

ALL LOGS DEPTH CORRELATED TO ANADRILL GAMMA LOG.

DENSITY CALIPER CLOSED BETWEEN 2594.50m MD AND 2598.2m MD  
DUE TO THE INDUCTION SONDE DETECTING A PIECE OF BRASS DEBRIS  
IN THE WELL. DENSITY - NEUTRON DATA IN THIS INTERVAL WILL BE INACCURATE.

MAX. TEMPERATURE: 104.1 DEG C AT 3331.10m MD  
MAX. INCLINATION: 47.28 DEG AT 2315.54m MD  
MAX. DOGLEG SERVERITY: 4.68 DEG/30m AT 2775.31m MD  
DEPLOYMENT ANGLE: 24 DEG

HVOL: 1620 FT^3  
AVOL: 865 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



## MAIN LOG 1:200



Depth Based Data - Maximum Sampling Increment 10.0cm

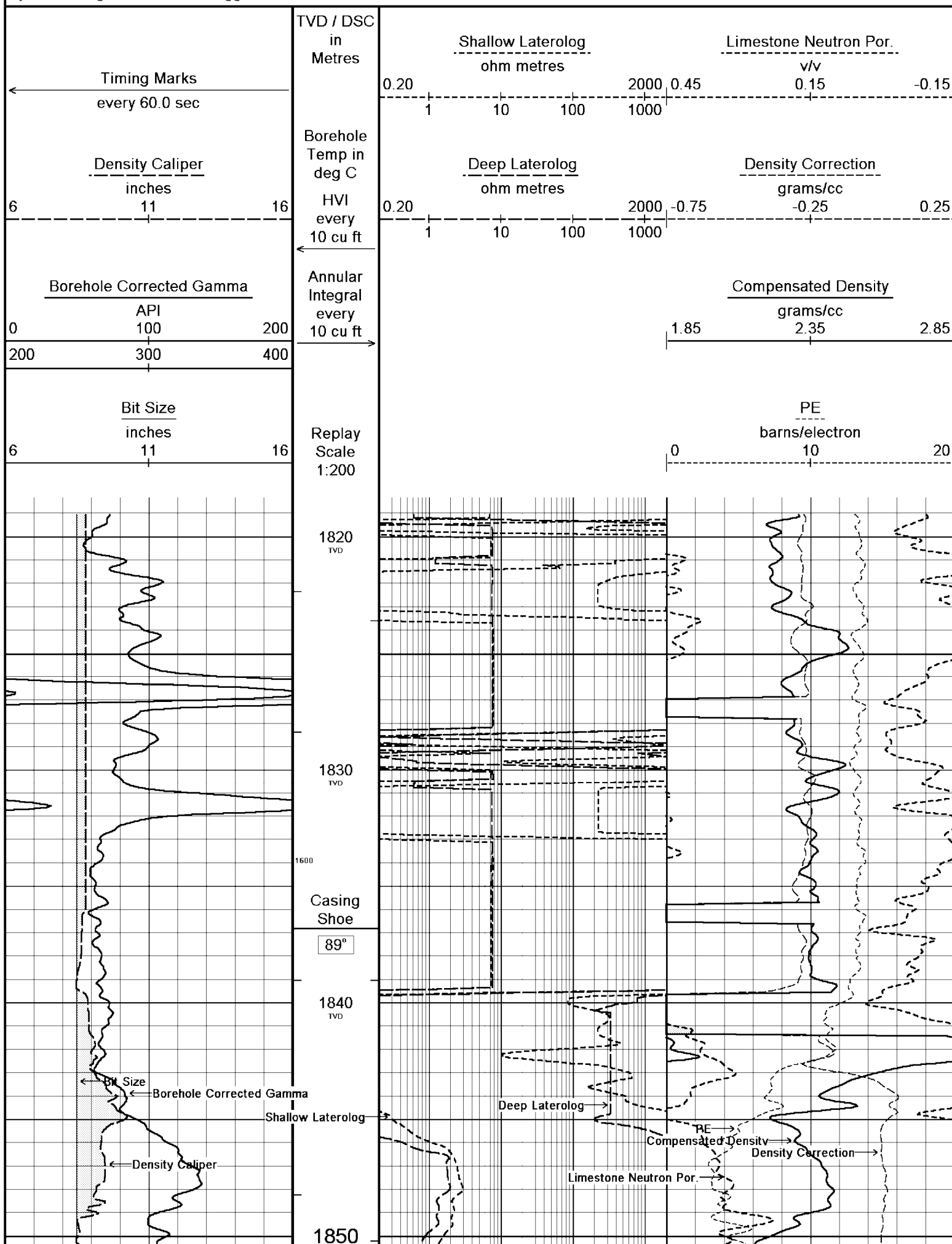
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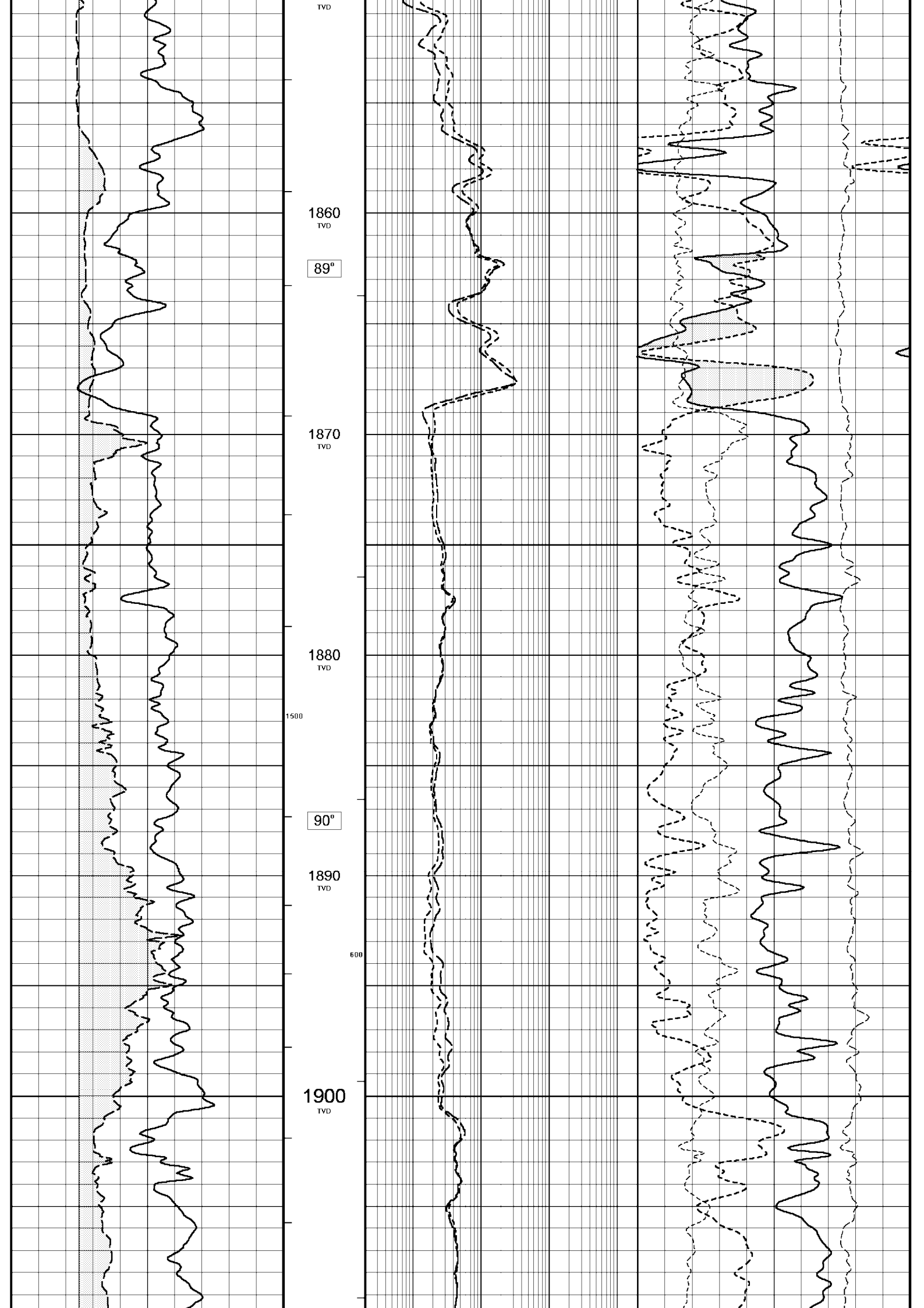
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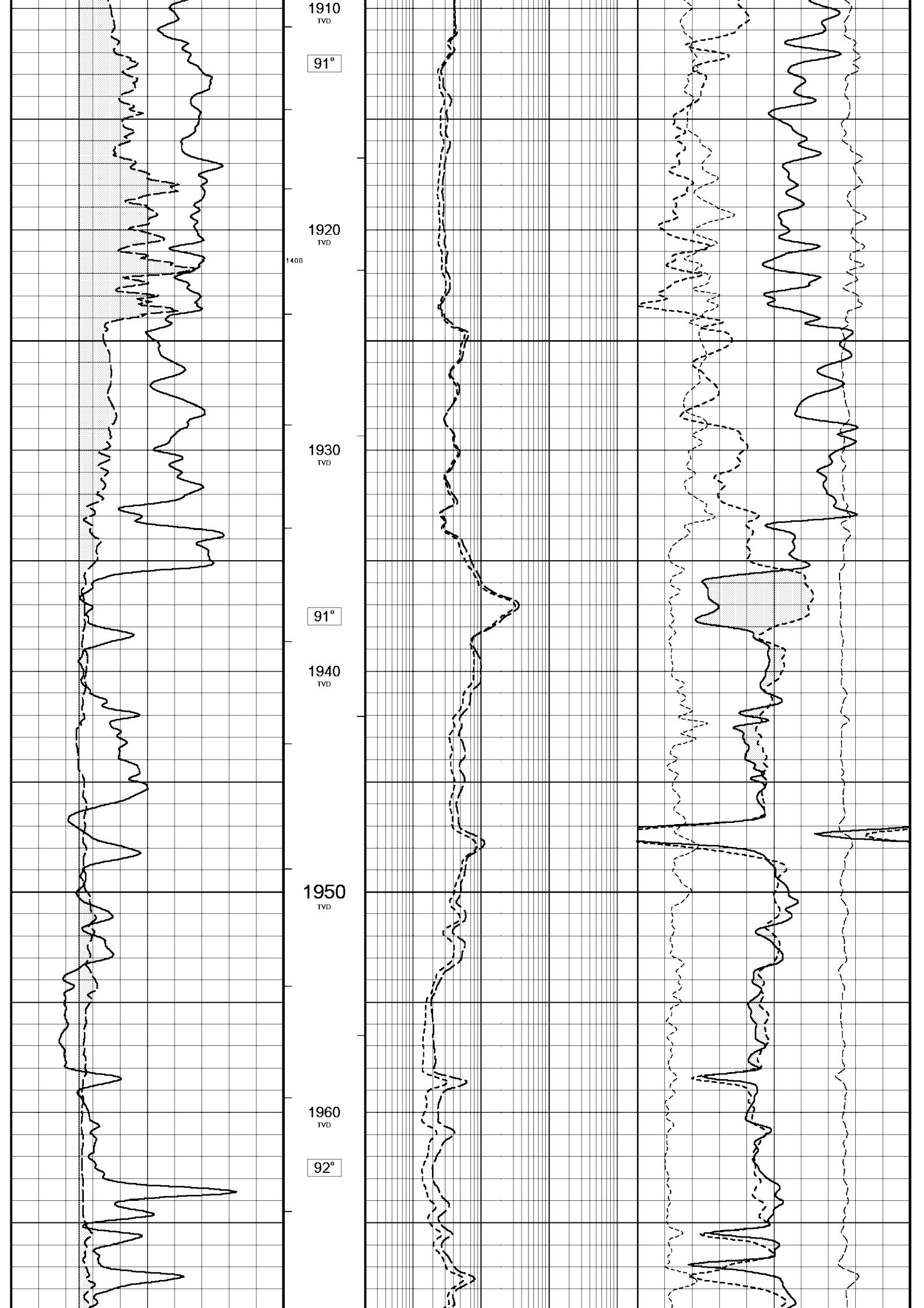
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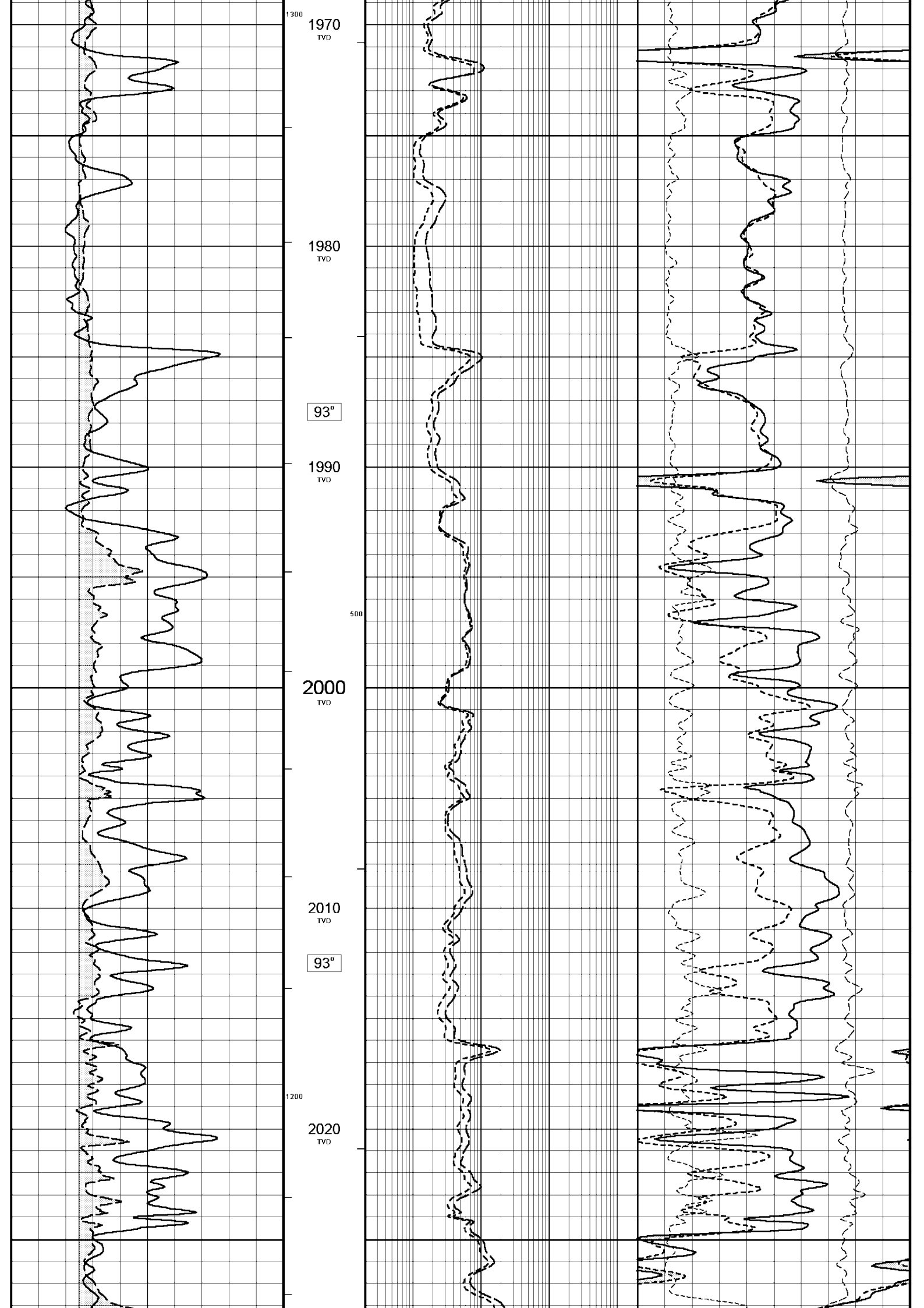
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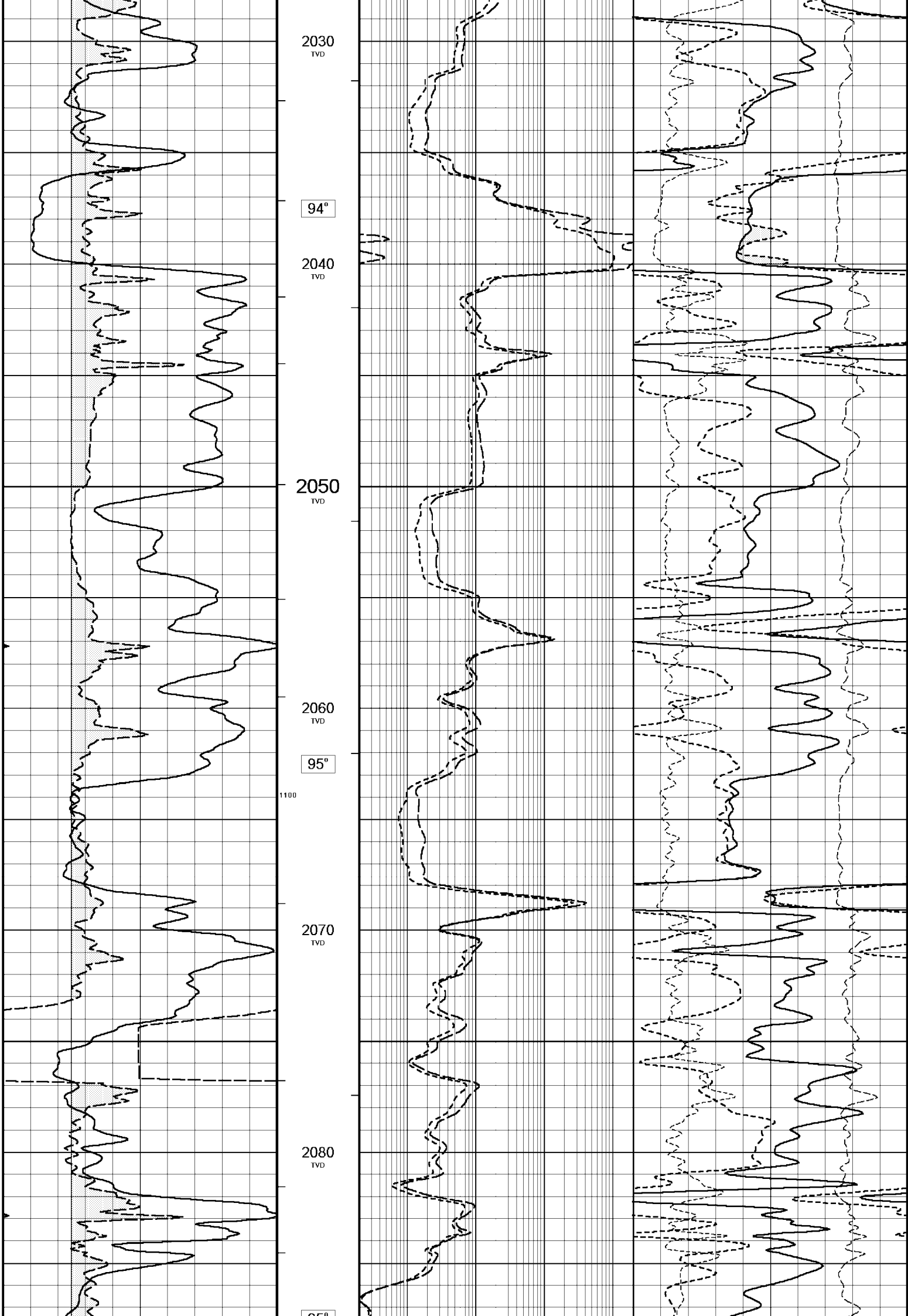
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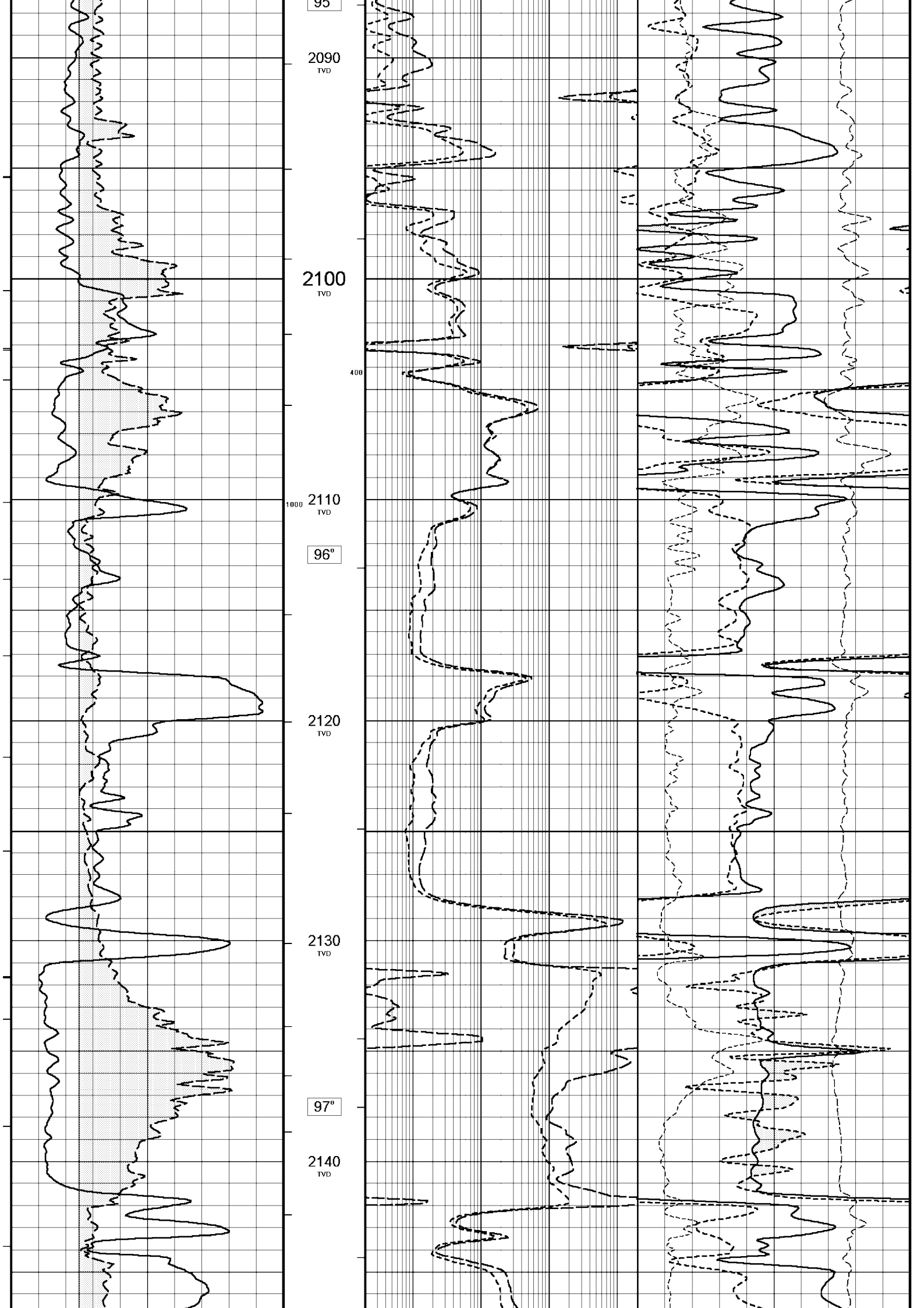


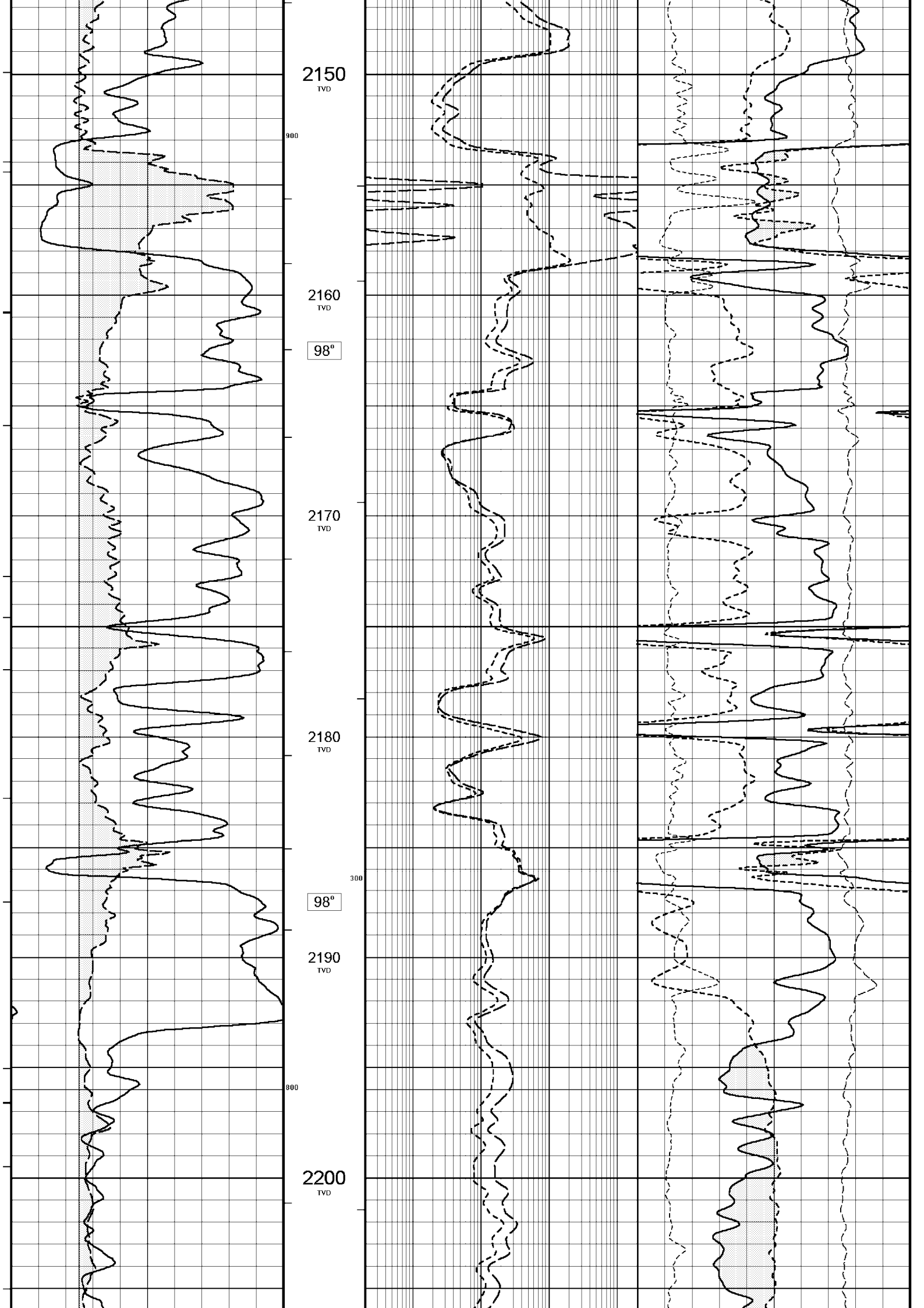




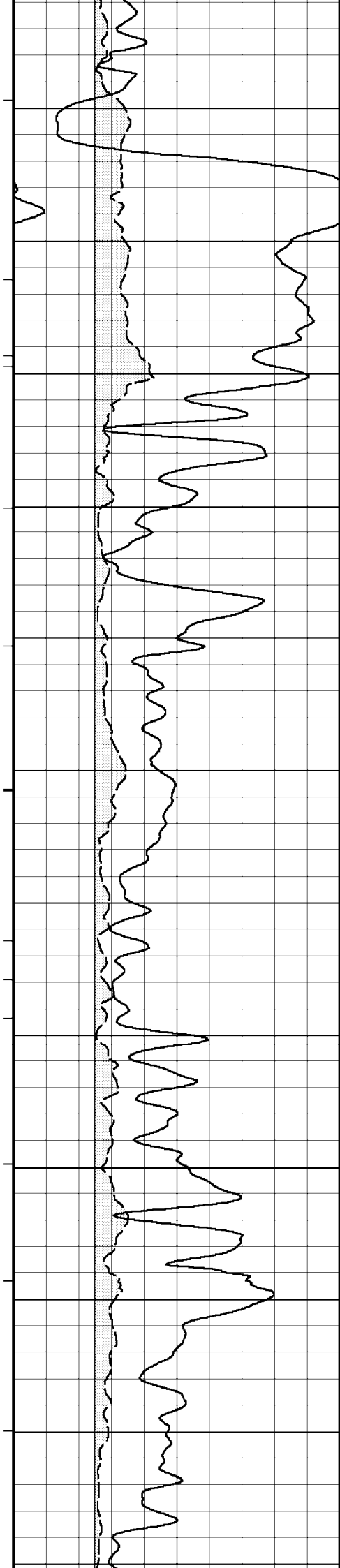












2210  
TVD

99°

2220  
TVD

2230  
TVD

100°

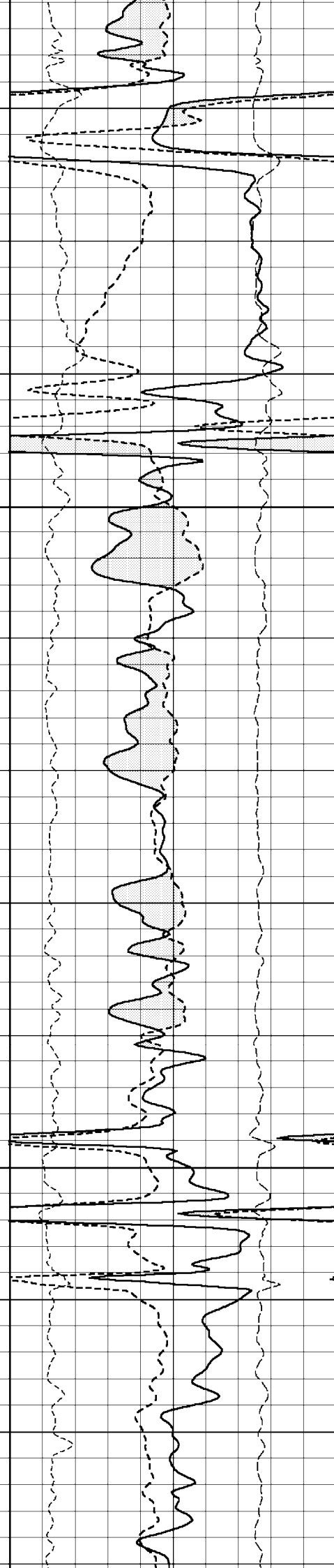
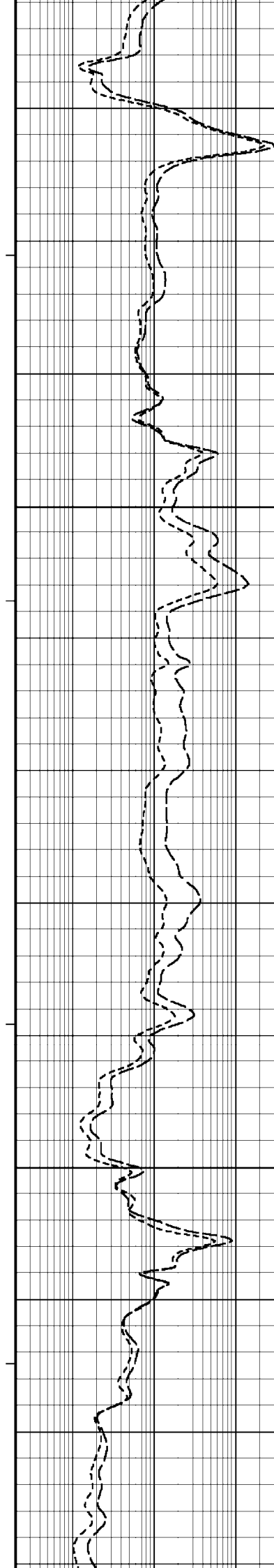
2240  
TVD

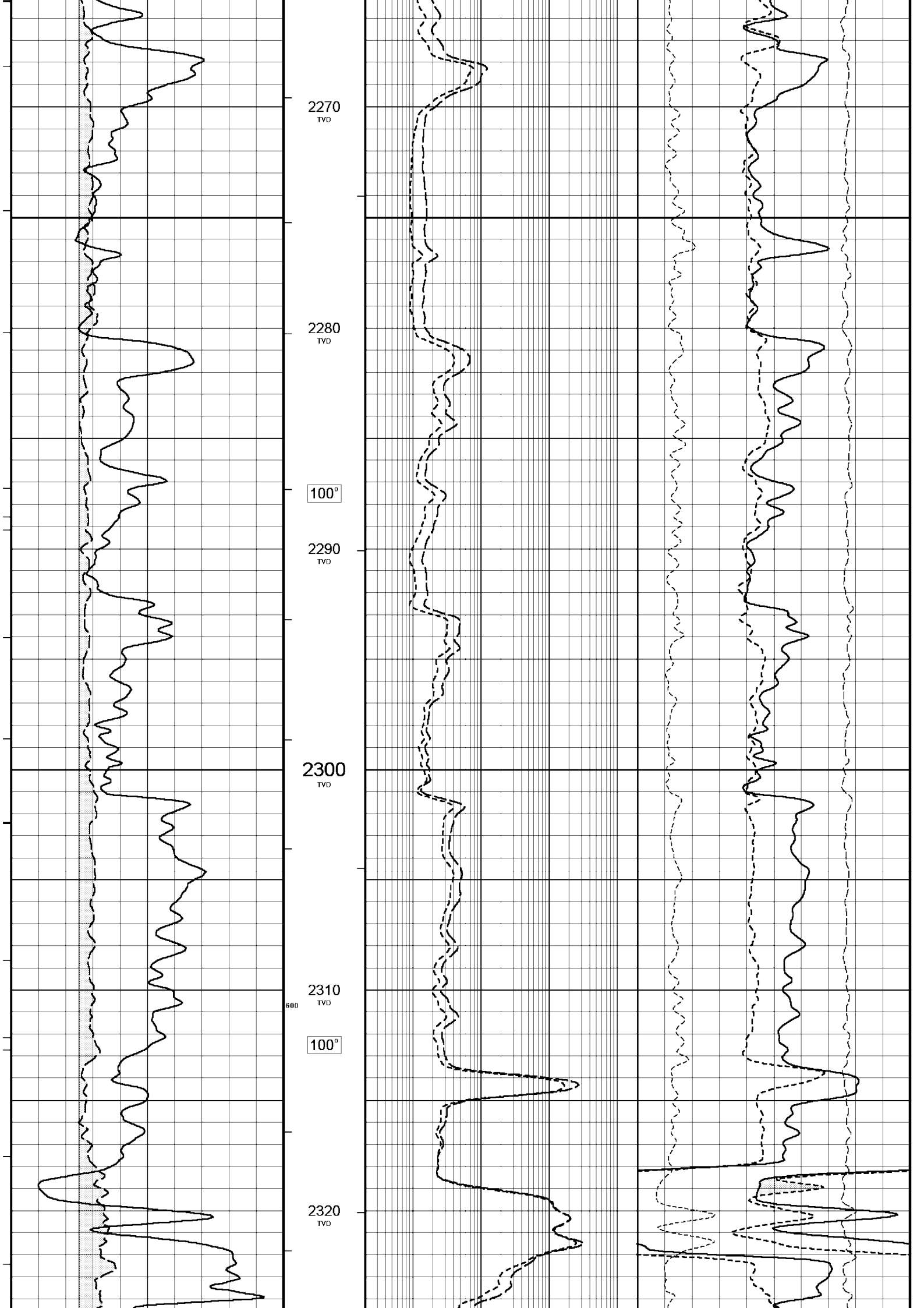
2250  
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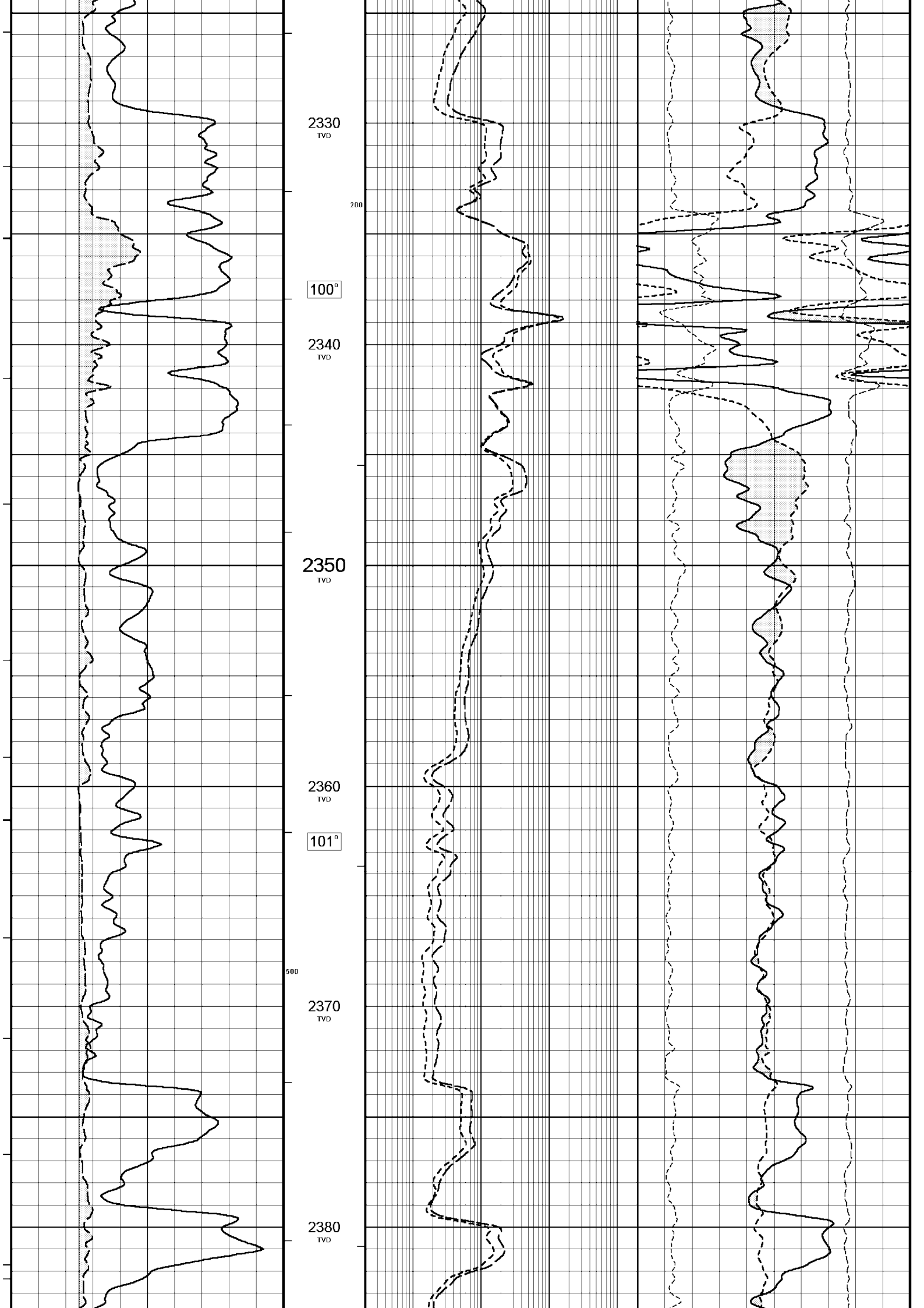
700

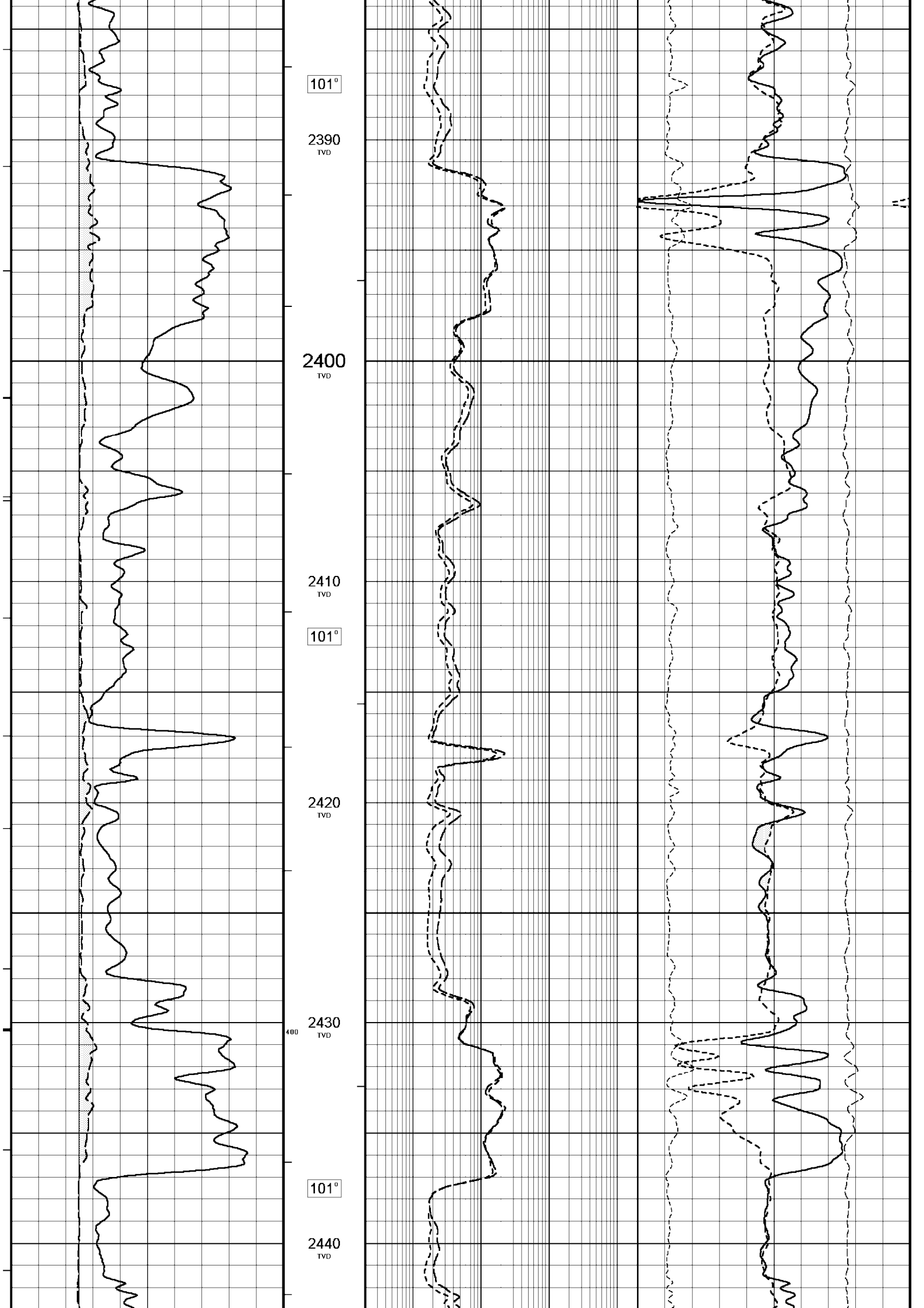
2260  
TVD

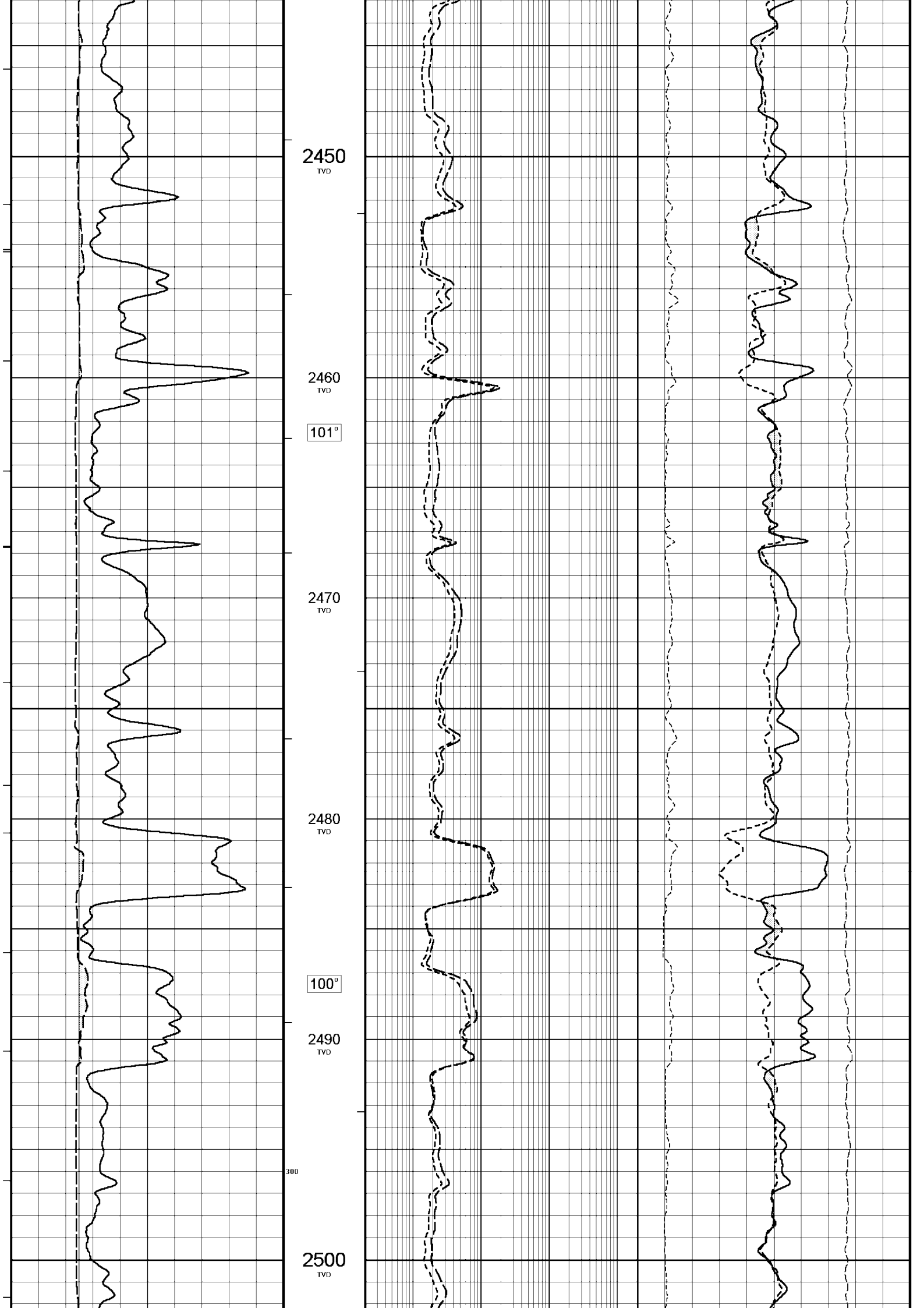
100°

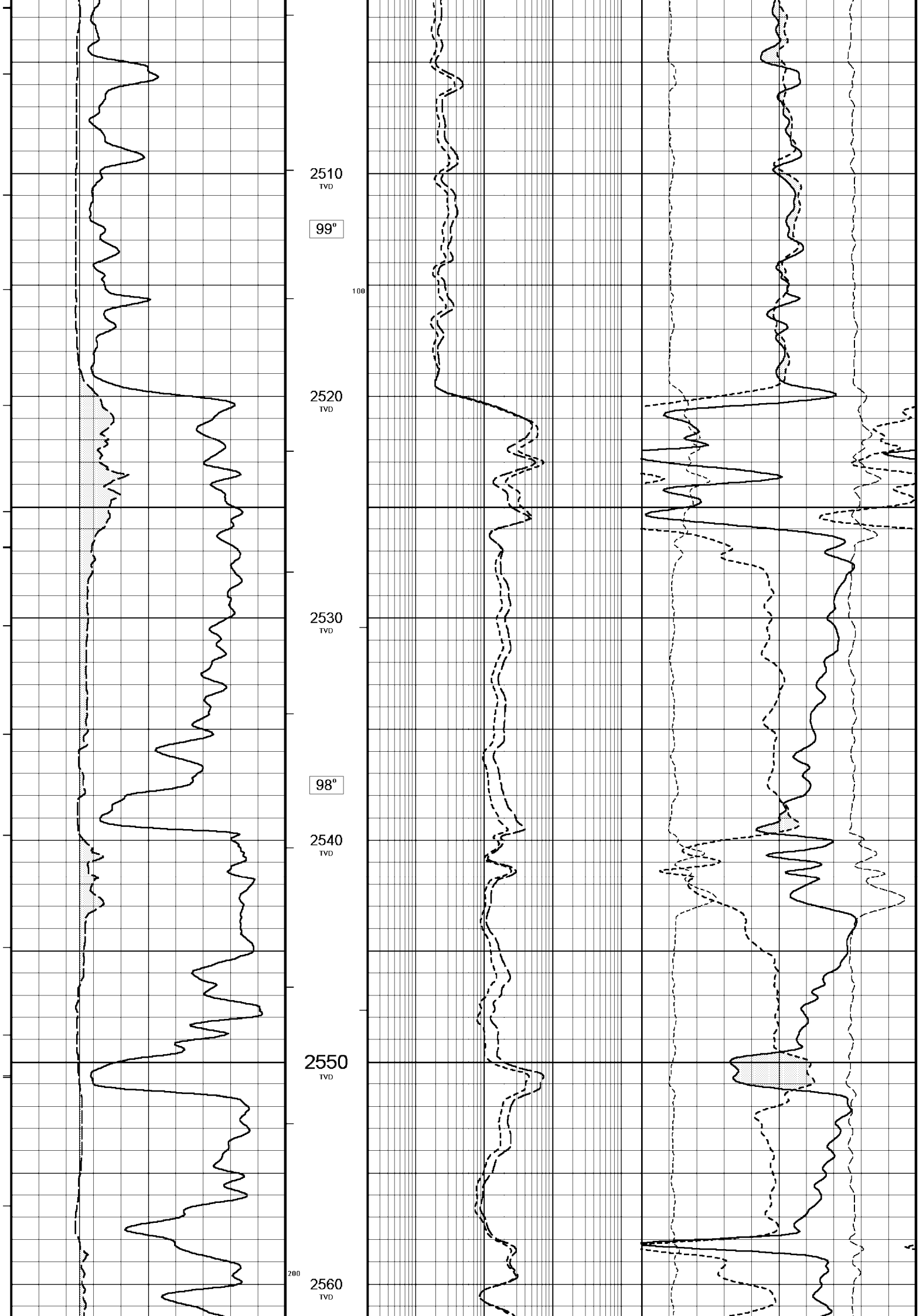


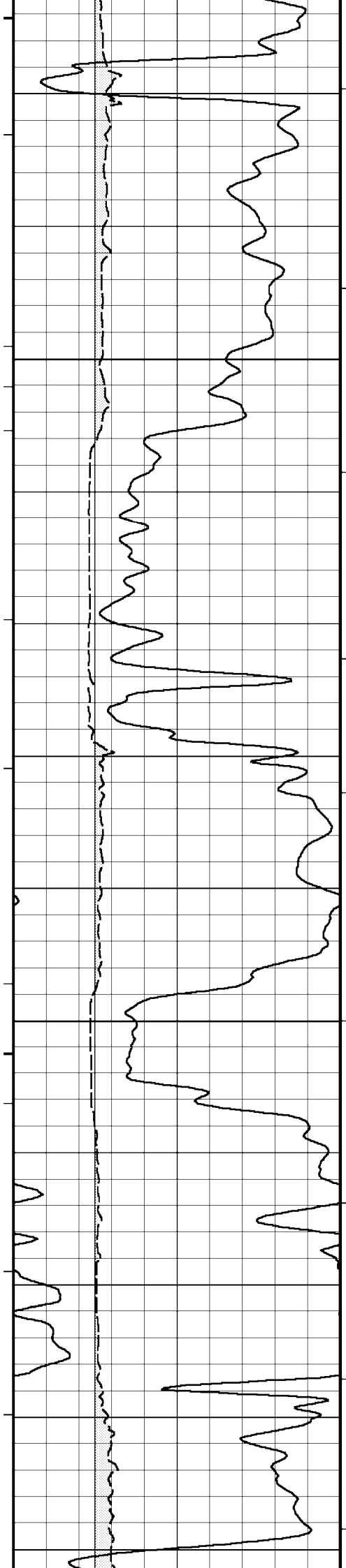












98°

2570  
TVD

2580  
TVD

98°

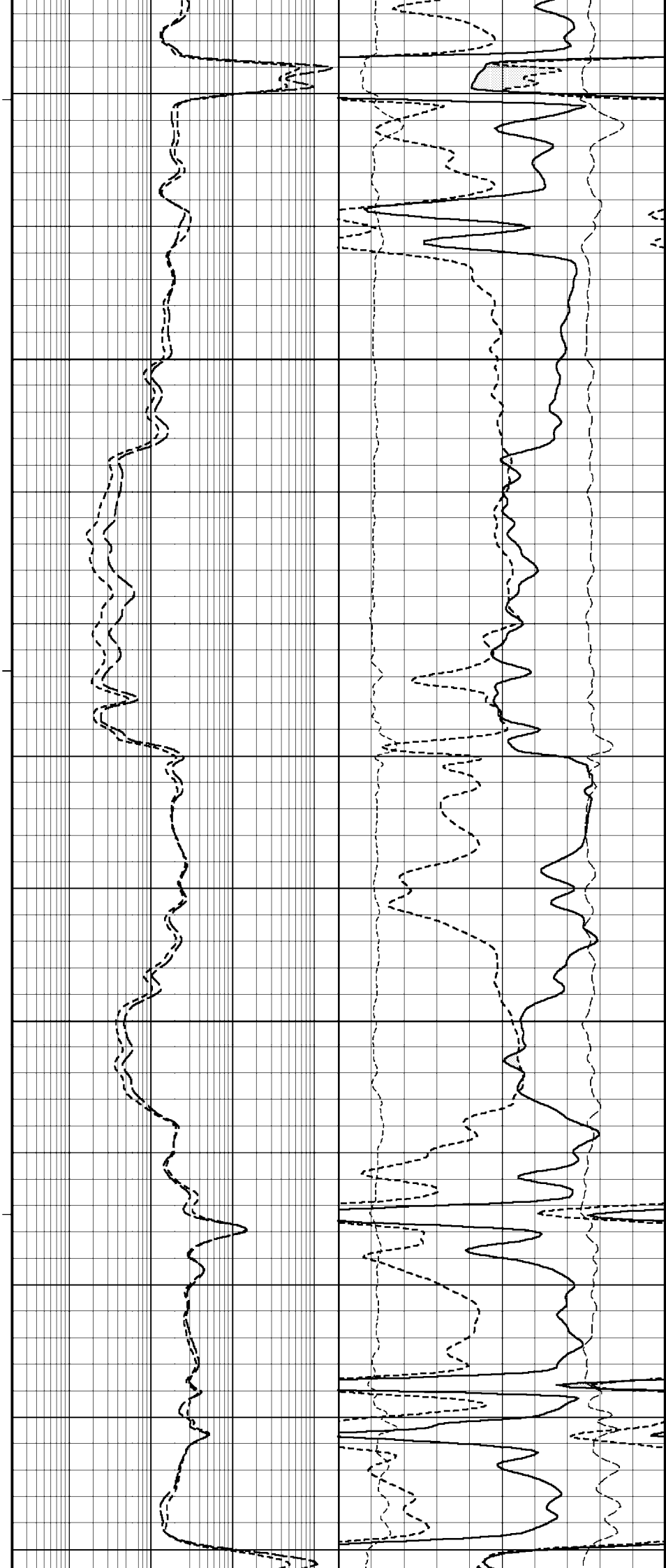
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TVD

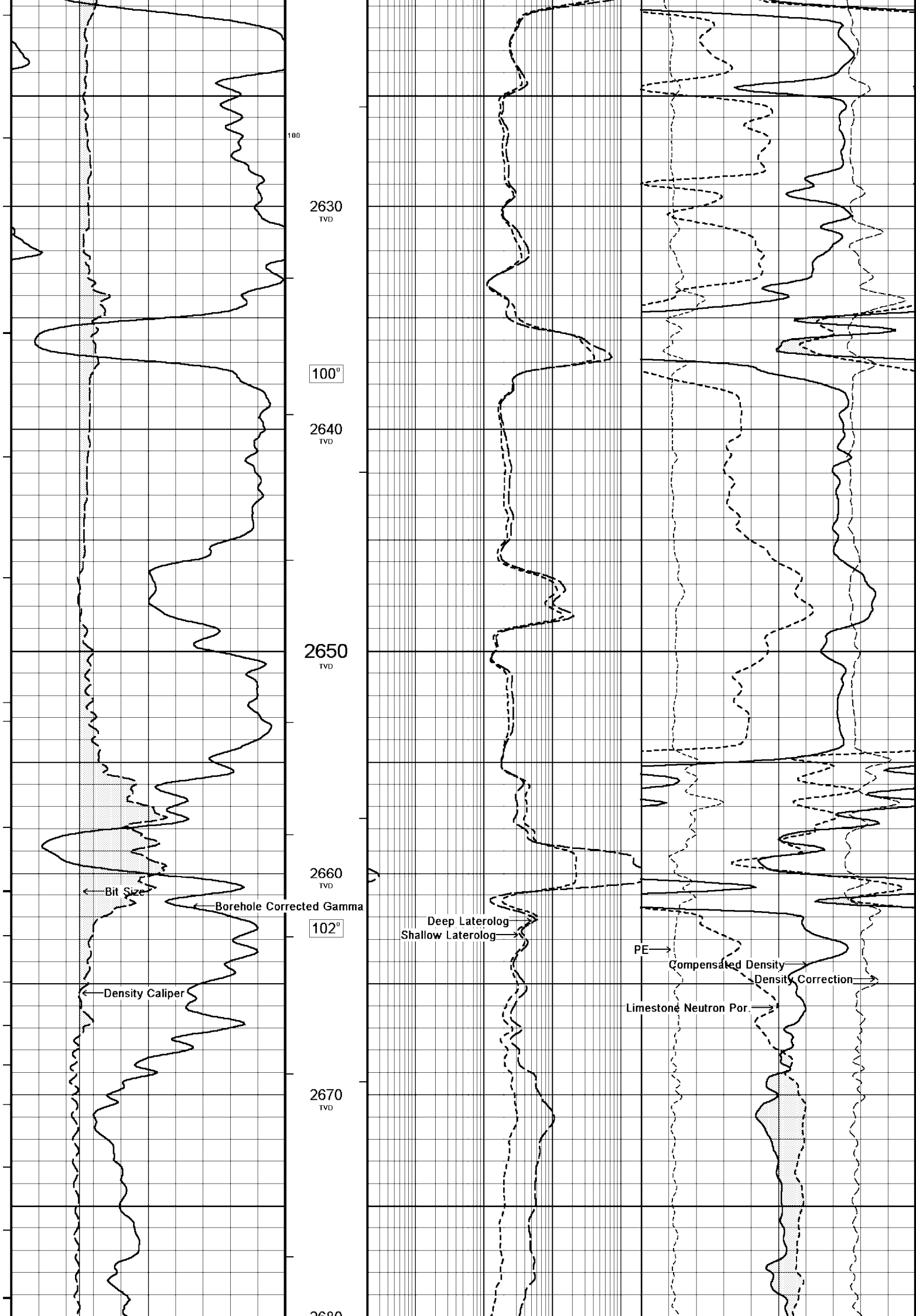
2600  
TVD

2610  
TVD

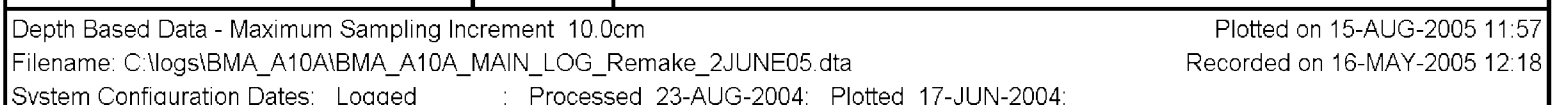
96°

2620  
TVD









BEFORE SURVEY CALIBRATION

C:\logs\BMA\_A10A\BMA\_A10A\_MAIN\_LOG\_TC\_Remake\_2JUNE05.dta

General Constants All 000		
General Parameters		
Mud Resistivity	0.134	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	

High Resolution Temperature Calibration MCG 098			Field Calibration on 8-MAY-2005,02:39
	Measured	Calibrated(Deg C)	
Lower	0.00	0.00	
Upper	100.00	100.00	

High Resolution Temperature Constants MCG 098	
Pre-filter Length	11

Gamma Calibration MCG 098			Field Calibration on 8-MAY-2005 02:39
	Measured	Calibrated (API)	
Background	9	6	
Calibrator (Gross)	1373	915	
Calibrator (Net)	1364	909	

Gamma Constants MCG 098		
Gamma Calibrator Number	060	
Mud Density	1.21	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN 085			Base Calibration on 3-MAY-2005 14:38
Base Calibration			Field Check on 8-MAY-2005 02:26
	Measured	Calibrated (cps)	
	Near Far	Near Far	
	3175 99	3714 110	
Ratio	32.086	33.764	
Field Calibrator at Base		Calibrated (cps)	
		1662 2343	
Ratio		0.709	
Field Check		Calibrated (cps)	
		1642 2394	
Ratio		0.686	

Neutron Constants MDN 085		
Neutron Source Id	NSN-E-739	
Neutron Jig Number	NEC-C-052	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.21	gm/cc

[illegible]

0.00  
0.00

0.00  
0.00

Laterolog Calibration MLE 016

Base Calibration on 29-APR-2005 15:49  
Field Check on

Base Calibration

Channel	Resistor 1	Measured		Calibrated (ohm-m)	
		Resistor 2	Resistor 1	Resistor 2	
Shallow	9.7	965.8	13.2	1321.0	
Deep	9.9	965.6	7.5	755.0	
Groningen	9.7	966.4	8.5	854.0	
Channel	Base Check (ohm-m)		Field Check (ohm-m)		
Shallow	49.2		0.0		
Deep	27.9		0.0		
Groningen	254.2		0.0		

Laterolog Constants MLE 016

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\_A10A\BMA\_A10A\_MAIN\_LOG\_TC\_Remake\_2JUNE05.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: 90.4 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 139 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

MBE 21 - THIRD BRIDLE  
MLK 111 Length: 3.76 m Weight: 88.2 lb

Compact Gamma  
MCG 98 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 46 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

Compact Inline Bowspring A  
MIS 24 Length: 1.74 m Weight: 33.1 lb

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 140 Length: 0.65 m Weight: 15.4 lb

Compact Upper Guard Sub.  
MUG 20 Length: 2.74 m Weight: 68.3 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

23.27 m DCOR - Density Correction  
23.25 m PDPE - PE

Compact Inline Standoff B  
MIS 129    Length: 0.65 m    Weight: 15.4 lb

Compact Laterolog Electrode Sub.  
MLE 16    Length: 3.76 m    Weight: 92.6 lb

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 133    Length: 0.65 m    Weight: 15.4 lb

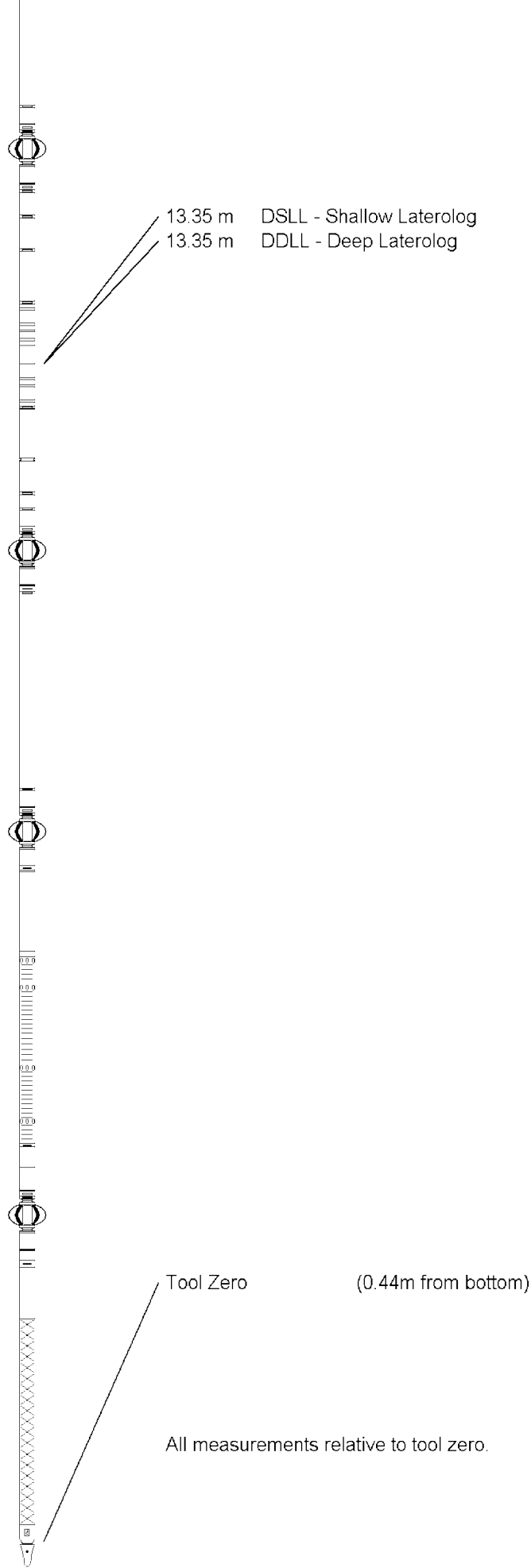
Compact Sonic  
MSS 66    Length: 3.82 m    Weight: 72.8 lb

Compact Inline Standoff B  
MIS 128    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: 0.40 m    Weight: 6.6 lb

Total    Length: 53.36 m    Weight: 1289.7 lb



COMPANY	ESSO AUSTRALIA PTY LTD
WELL	BREAM A10A
FIELD	BREAM
PROVINCE/COUNTY	BASS STRAIT

COUNTRY/STATE		AUSTRALIA			
Elevation Kelly Bushing		metres	First Reading	2699.70	metres
Elevation Drill Floor	32.82	metres	Depth Driller	2717.18	metres
Elevation Ground Level	-59.40	metres	Depth Logger	2212.30	metres
		DUAL LATEROLOG - GR DENSITY - NEUTRON 1:200 TVD			